

proposed project site, probably because it is not an area characterized by...upwelling and food production known to attract marine mammals.” (Revised DEIR at p. 4.7-55.)

These poorly supported characterizations are simply incorrect and must be revised in the Revised DEIR. In fact, the presence of several common and protected marine mammal species has been documented in marine mammal surveys in the area,<sup>232</sup> and is attested to and predicted by marine mammal experts. According to John Calambokidis, a research biologist and expert on west coast cetacean populations (who NOAA Fisheries relies on for its annual marine mammal stock assessments), the proposed Cabrillo Port project site is inhabited much more often by blue whales and other cetaceans than is claimed in the Revised DEIR. Addressing the document’s position, he states:

...it is not reasonable to infer... that they would not occur near the project area. I know from our own observations and those of others that blue whale concentrations have sometimes occurred not far from the proposed site. This would indicate blue whale occurrence at or very near the project site should not be considered unlikely and in fact should be expected.... We have sighted blue and humpback whales in waters not far from the proposed project area. There have also been sightings made by other boaters and even shore observers of blue and humpback whales not far from the project area including to the east (inshore). The proposed project area is actually in deeper water and closer to shore than many of the sightings we have made of humpback and blue whales off California. Therefore the [Revised DEIR’s] implication that the proximity of the proposed site to shore puts it outside the typical habitat of either of these whale species is not accurate.<sup>233</sup>

Blue and fin whale prey also occurs within the project area, in patches of sufficient density to attract foraging members of both species. Consequently, individuals and aggregations of these species are actually “likely” to pass or even feed “within 10 miles” of the proposed project site.<sup>234</sup>

The Revised DEIR also appears to underestimate the potential for gray whales to inhabit or migrate through the project area. Gray whale experts understand that the migration paths traveled by these cetaceans tend to be much broader and more erratic than is portrayed in the Revised DEIR (i.e. in Figure 4.7-1, at p. 4.7-19), and also tend to vary significantly from year to year. This means that in general, migrating gray whales are likely to travel much closer to the proposed project site than is suggested in the

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G207-193

Sections 4.7.1.5 and 4.7.4 contain information on the potential occurrence of gray whales, potential impacts associated with the proposed Project and pertinent mitigation measures during gray whale migration.

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<sup>232</sup>/ Bearzi, M. 2003. *Behavioral ecology of the marine mammals of Santa Monica Bay, California*. Ph.D. Dissertation, University of California, Los Angeles, cited in: Abramson and Hoecherl, *supra*.

<sup>233</sup>/ Calambokidis, John, Research Biologist, Cascadia Research Collective, Olympia, WA, *Comment Letter on Cabrillo Port Revised DEIR*. March 31, 2006.

<sup>234</sup>/ Perryman, Wayne. Research Biologist, NOAA Southwest Fisheries Science Center, Long Beach CA. Personal Communication via email, April 22, 2006.

document, and are thus likely to occur in the project site with much greater frequency than suggested in the Revised DEIR.<sup>235</sup>

Clearly, significant gaps exist in the data used for the Revised DEIR analysis on marine mammal presence in the area. At a bare minimum, the Revised DEIR must conduct a much more comprehensive survey of scientific studies on the marine mammals of the region, and update its catalog of reports of species presence near the project site, and potential for occurrence near the project site, to reflect this available information. Because the major impacts to marine mammal species acknowledged in the Revised DEIR—including habitat avoidance and behavior alteration due to acoustic emissions; harm and death due to a major LNG spill or fire; and harmful or fatal collisions with Cabrillo Port vessel traffic—are quantified based on an assumed likelihood of presence in the project area, it is of fundamental importance that *empirical, site-specific* data be gathered from surveys at and around the proposed Cabrillo Port location. This is especially true given the disparity of opinion that exists between scientists consulted by authors of the Revised DEIR, and independent experts who were not consulted. If these species do in fact occur in and around the project area at greater numbers than is acknowledged in the Revised DEIR (which is suggested by several sources), both the intensity and the frequency of these impacts will be exacerbated for these species, to levels above those predicted in the current analysis. This analytic uncertainty within the Revised DEIR emerges from the lack of site specific data, and is unacceptable given the imperiled status of many of these species. Thus, it must be addressed for the EIR to be adequate.

*Impact Analysis for Marine Mammal Species Relies on Unsubstantiated Claims and Irrelevant Data, Resulting in an Underestimation of Impacts*

As discussed earlier, the marine ecosystem of the Southern California Bight is already in a gravely imperiled condition; fisheries are highly reduced and most of the Bight's great whale species remain under special regulatory protection while they struggle to return from the brink of extinction. The Revised DEIR now admits to Class I impacts to cetaceans and other species in the event of an accident at the Cabrillo Port facility, yet continues to downplay potential impacts to these species from normal facility operations. Unfortunately, little real data, some of which appears to be incorrect, is provided to substantiate these conclusions.

For example, in its discussion of potential for FSRU operations to cause avoidance of habitat surrounding the FSRU due to operations, the Revised DEIR states: "Most common species of marine mammals, along with several threatened and endangered species, have been observed from oil platforms in the area, and it is very unlikely that operation of the FSRU would result in the avoidance of the area by marine mammals. Impacts could therefore be adverse, but would not rise above significance criteria, and no mitigation measures would be required." (Revised DEIR at p. 4.7-54.) Yet, this assertion

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G207-194

Section 4.7 and Appendix I have been updated with the most recent available information and to reflect the status of the ongoing Section 7 ESA consultation for threatened and endangered marine species.

G207-195

Section 4.7 contains updated stock assessments for marine mammals in the Project vicinity according to the latest available information from NOAA. In addition, marine mammal experts have been consulted regarding potential impacts and mitigation, and based upon their expertise, text in Section 4.7 has been clarified (see Appendix I).

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<sup>235</sup> / Id.

lacks any supporting citations, any discussion of how the acoustic or operational characteristics of an FSRU compare to an oil platform (in order to validate the comparison), or any discussion of how simple observations from oil platforms demonstrate that the observed animals are not being significantly impacted. Considering that the FSRU is predicted to have an acoustic signal reaching more than an order of magnitude above the 180 decibel (dB) threshold for Level B take under the Marine Mammal Protection Act (Revised DEIR at p. 4.7-62), this represents a gross inadequacy of impact analysis (especially in conjunction with the Revised DEIR's lack of data on marine mammal presence at the site) and must be rectified.

As noted in our comments on the original Draft EIS/EIR, the FSRU and large LNG tankers will both individually and cumulatively impact marine wildlife due to the noise pollution and potential for ship strikes. See also attached report on *Anthropogenic Noise and the Channel Islands National Marine Sanctuary*, prepared by the EDC and submitted to the Sanctuary in 2004.<sup>236</sup> As a result of this report and the recommendations contained therein, the CINMS and the National Marine Sanctuary Program are taking a closer look at the effects of noise on marine resources.

#### *The Revised DEIR Contains Contradictory Impact Mitigation Measures*

In order to reduce impacts to migrating gray whales from offshore construction activities, the Revised DEIR proposes "AM BioMar-9a," which states: "The applicant would conduct offshore construction activities outside the gray whale migration season (June 1 through November 30)." (Revised DEIR at p. 4.7-85.) In other words, pipelaying and other offshore construction activities will only occur during the summer and autumn, so as to not disrupt the north or southbound migrations of gray whales.

Yet the Revised DEIR states almost the exact opposite to downplay impacts to air quality in the region. Describing the pollution to be emitted from offshore construction, it states: "These emissions would occur for only a relatively short duration, i.e., 24 days for mooring installation and 35 days for offshore pipelaying, *and are not expected to occur during May through October*, which is the period of historical high ozone concentrations for the region." (Revised DEIR at p. 4.6-36, emphasis added.)

If the Revised DEIR is to be believed, the 59 days required for offshore construction activities will only occur during the month of November, a rather incredible proposal given the total time required for mooring and pipelaying. If these statements were developed in accidental isolation from each other, then the permitting agencies must develop and recirculate new, clear alternative mitigation measures that don't rely on unrealistic, mutually exclusive chronological shuffling to sufficiently reduce impacts to both air quality and gray whale migrations. If the Revised DEIR truly intended to restrict these environmentally harmful offshore activities to one month of the year, then

G207-195 Continued

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G207-196

The discussion of offshore construction impacts in Section 4.6.4 has been revised, as applicable, to indicate that offshore pipeline construction would not occur during the gray whale migration period, which lasts from November through June.

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<sup>236</sup> / Polefka, et al., Environmental Defense Center, *Anthropogenic Noise and the Channel Islands National Marine Sanctuary*, September 28, 2004.

enforcement measures must be developed and articulated to ensure that the Applicant adheres to this challenging schedule.

***The Revised DEIR Fails to Adequately Analyze Impacts to Zooplankton from Operational Seawater Intake and Thermal Discharges***

Seawater intake associated with Cabrillo Port operations has significant potential to cause harm to biological communities in the project area. This is partially acknowledged in the Revised DEIR, which states:

Impingement or entrainment of marine organisms during seawater uptakes on the FSRU or LNG carriers could impact fish species or EFH in the Project site. Impingement can occur when fish and other aquatic life are trapped against seawater intake screens. Entrainment can occur when aquatic organisms, eggs, and larvae are drawn into a water system, and then pumped back out. (Revised DEIR at p. 4.7-46.)

Unfortunately, the Revised DEIR takes a simplistic and cavalier approach to its discussion of the scope of these implications, minimizing or dismissing likely impacts with little real scientific support. In place of quantitative data on biological resources at the project site, the analysis cobbles together arguments and conclusions from pre-existing data with limited or questionable relevance to these impacts. The Revised DEIR omits or ignores significant data and expert opinion that counters the report's analytic methods and conclusions regarding zooplankton and fisheries impacts. Finally, the analysis is laced with inconsistencies and suppositions that impede clear illustration of the scope of impact. In sum, the identified deficiencies in the Revised DEIR and the countervailing supplemental data indicates that significant additional impact analysis is required to fulfill the legal requirements for impact disclosure and mitigation. Lacking site-specific surveys of the planktonic communities *at the project site*, rigorous analysis based on that data, and more concrete projections on actual intake and discharge, the Revised DEIR remains fundamentally deficient.

***The Technical Summary of Seawater Intake is Problematic and Lacks Clarity; LNG Carrier Vessel Intake is Not Adequately Disclosed Relative to Potential Impact***

The seawater intake, as proposed in the Revised DEIR, "would occur at the bottom of the FSRU's hull, at a depth of 42.7 feet." (Revised DEIR at p. 4.7-38.) Table 4.7-8 in the section (at p. 4.7-48) supposedly "provides a summary of seawater uptakes required for operation of the FSRU and LNG carriers" (Revised DEIR at p. 4.7-47) and states that intake for "Ballast Water – FSRU (During Regasification)" would occur at the rate of 168,840 gallons per hour, for an annual intake of approximately 1.48 billion gallons per year for this purpose.

However, there are several problems with this analysis. First, Table 4.7-8 fails to disclose any seawater intake volumes or rates for *LNG carriers*, despite earlier claims

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G207-197

G207-197

Section 4.7.4 contains updated information on uptake volumes and potential impacts of seawater uptake and discharge on marine biota, including ichthyoplankton from intake of seawater, from thermal discharges of cooling water. The ichthyoplankton impact analysis (Appendix H1) includes both literature results and data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) surveys. CalCOFI surveys have been consistently collected over a period of time and are the best scientific data currently available.

G207-198

Monitoring at the site will result in site-specific data for subsequent review by regulatory agencies. See response below. In addition, the ichthyoplankton analysis (Appendix H1 and within Section 4.7) has been revised to reflect current intake volumes. See the response to the preceding comment. While not specifically required, the lead agencies have caused several original studies, such as the ichthyoplankton analysis, to be prepared to enhance the analysis of the potential environmental impacts of the proposed Project. However, as provided by section 15204, State CEQA Guidelines, "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors."

G207-198

G207-199

The USEPA has indicated in its draft NPDES permit that monitoring will be required. The LNG carrier intake was not considered because normal shipboard cooling intakes for habitability are not within the required scope of this analysis. In addition, since cargo transfer pumps are on the FSRU, cooling water intakes associated with necessary power generation are accounted for in the FSRU intakes.

G207-199

that it does. In the Project Description, the Revised DEIR states that each LNG Carrier will intake between 14.2 and 22.6 million gallons of seawater while docked at Cabrillo Port. (Revised DEIR at p. 2-26). This represents an annual seawater intake of between 1.8 and 2.9 billion gallons annually *in addition* to the 3.8 billion gallons of intake disclosed for FSRU operations at Table 4.7-8. As the Revised DEIR admits, seawater intake causes harm and mortality to marine biological resources entrained in its flow and impinging on its machinery. The omission of seawater intake from LNG carriers from the analysis of environmental impacts ignores 75% of the annual intake volume. This omission is a serious error that reveals a capricious downplaying of the impacts Cabrillo Port operations will have on the biological resources at the project site. The Revised DEIR must disclose and evaluate the full scope of potential impacts to marine biological resources from project seawater intake.

Second, the Revised DEIR proposes intake of seawater at the FSRU of 168,840 gallons per hour for ballasting during regasification. This figure is multiplied to arrive at the disclosed annual intake volume for ballasting of about 1.47 billion gallons per year. (Revised DEIR at p. 4.7-48). Yet two pages earlier, a ballast pump configuration is proposed with “a maximum pumping capacity of 1.59 million gallons of water per hour.” (Revised DEIR at p. 4.7-46). The Revised DEIR fails to discuss why the FSRU will have seawater intake *capacity* a full order of magnitude greater than the proposed rate of intake. Lacking a reasonable and transparent explanation of this remarkable disparity, a significant underestimation in the actual intake volumes is strongly suggested. Future impact analysis should better explain this apparent discrepancy.

Third, the description of proposed intake screening for the reduction of marine life entrainment is unacceptable relative to the limited impact analysis completed in the Revised DEIR. At page 4.7-36, the Revised DEIR states, “Ballast water intakes would be screened... to minimize impingement of aquatic organisms.” Continuing, the document states,

“A typical sea chest design is fitted with an external coarse filter grill with grading clearance spacing of 1-inch (2.5 centimeters [cm]).... The sea chests would also be fitted with internal valve screens. Further downstream from the internal screen, a secondary fine-filter would be fitted in place with a screen size of approximately 0.2 inches (0.5cm). This screen would prevent the intake of some marine matter and organisms (e.g. those larger than 0.2 inches.” (Revised DEIR at p. 4.7-46, -47).

Additionally, the Revised DEIR does not specify whether the FSRU or the LNG Carriers will actually be fitted with “typical” sea chests as inferred, and thus whether or not they will feature the primary “coarse grills” for preventing entrainment of larger organisms. This must be clarified for complete consideration of marine life entrainment and impingement impacts. Whether or not the grills will be deployed and the size of the mesh used are direct factors in assessing impact to marine biological resources.

## G207-199 Continued

G207-199  
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### G207-200

The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. The previously proposed FSRU generator engine cooling system used seawater as the source of cooling water for the four generator engines. The Applicant now proposes using a closed tempered loop cooling system that circulates water from two of the eight submerged combustion vaporizers (SCVs) through the engine room and back to the SCVs, which reduces the seawater intake volume by about 60 percent. The seawater cooling system would remain in place to serve as a backup system during maintenance of the SCVs or when the inert gas generator is operating. Section 2.2.2.4 contains a description of the proposed uptakes and water uses for the FSRU.

G207-200

Section 4.7.4 contains information on uptake volumes and potential impacts of seawater uptake and discharge on marine biota, including ichthyoplankton from intake of seawater, and from thermal discharges of cooling water. The ichthyoplankton impact analysis (Appendix H1) includes both literature results and data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) surveys. CalCOFI surveys have been consistently collected over a period of time and are the best scientific data currently available.

G207-201

### G207-201

Potential impacts on ichthyoplankton are presented in Appendix H1 and summarized in Section 4.7.4. Ichthyoplankton impacts assumed 100 percent mortality, and did not depend upon any assumed biological effectiveness of filters or grills. See also the response to the comment at the bottom of page 78 and the top of this page of this letter.

The Revised DEIR also omits discussion of the LNG carrier vessel ballast/sea chest systems, though, as discussed, the vessels will intake nearly as much seawater and concomitant marine life as the FSRU. Therefore, LNG carrier vessel ballasting systems must also be described in detail and their contribution to zooplankton impacts itemized and differentiated.

These specific problems and deficiencies of disclosure must be addressed, so that an accurate and complete environmental impact analysis can be relayed in the EIR.

*The Revised DEIR Inadequately Describes the Environmental Setting*

In addition to the specific problems and deficiencies identified above, the general scope of impact analysis for Cabrillo Port seawater intake with respect to marine biological resources lacks sufficient baseline data, breadth of scope, and fails to acknowledge the biological complexity and importance of the project area. Consequently, its conclusions as to the insignificance of Cabrillo Port impacts due to intake are dubious at best.

Because Cabrillo Port operations will result in zooplankton mortality and associated ecosystem impacts (some acknowledged in the Revised DEIR and others described in this comment) for the life of the project, the Revised DEIR must present an accurate and complete description of the current ecological baseline in the environment surrounding the proposed project site. Unfortunately, it fails to do so, by omitting pertinent data on zooplankton abundance in the Southern California Bight indicating that zooplankton biomass is already severely reduced and imperiled, with severe implications for the area's marine ecology.

Zooplankton is of fundamental importance to marine ecology, the foundation for ecosystem function. According to the State of California,

...plankton form the base of many food chains and support such commercial fisheries as herring, mackerel and sardine. In addition to being consumed by small fish, plankton also support shrimp-like crustaceans known as krill, the major source of nutrition for the largest creatures on earth, including blue and fin whales... [plankton] also supports other important fishery stocks typically restricted to deeper waters, including tuna, swordfish, rockfish, sablefish, Pacific hake and flatfishes.<sup>237</sup>

In 1995, scientists from Scripps Institution of Oceanography published findings revealing an 80% decline in zooplankton biomass in the Southern California Bight since 1951, which they correlated with a temperature increase of the ocean's surface layer. Discussing their findings, they state that the decline represents "a major perturbation in the biota of the region because ...zooplankton form a significant part of the food web...

<sup>237</sup>/ The Resources Agency of California, *California's Ocean Resources: An Agenda for the Future*, Chapter 4: *California's Ocean Ecosystem*, p. 4-9. March 1997.

G207-201 Continued

G207-201  
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G207-202

The CalCOFI database was used as the most appropriate and available specific source of current ichthyoplankton data for the site. While not specifically required, the lead agencies have caused several original studies, such as the ichthyoplankton analysis, to be prepared to enhance the analysis of the potential environmental impacts of the proposed Project. However, as provided by section 15204, State CEQA Guidelines, "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors."

G207-202

G207-203

As stated above, the CalCOFI database was used as the most appropriate and available specific source of current ichthyoplankton data for the site. While not specifically required, the lead agencies have caused several original studies, such as the ichthyoplankton analysis, to be prepared to enhance the analysis of the potential environmental impacts of the proposed Project. However, as provided by section 15204, State CEQA Guidelines, "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors."

G207-203

Further, section 15125(a), State CEQA Guidelines, provides in part, "An EIR must include a description of the physical environmental conditions in the *vicinity of the Project, as they exist at the time the notice of preparation is published...*" (*emphasis added*). The information within the document meets and exceeds this requirement.

and are the main diet of... birds and many schooling, commercially important fish species."<sup>238</sup>

In line with the critical ecological roles played by zooplankton, the Scripps researchers concluded that the continued decline of zooplankton at the rate documented during the multi-decade period of their analysis would be "of great concern to the coastal ecosystem," and could be "biologically devastating."<sup>239,240</sup>

Related to this crisis in zooplankton, the severely reduced populations of Southern California groundfish species have resulted in the enactment of unprecedented management measures aimed at their recovery, including an array of no-fishing areas, shortened fishing seasons, and trip limits. Even with these measures, species such as bocaccio and cowcod are currently designated with one-hundred year recovery schedules.<sup>241</sup>

Consideration of this immense decline in zooplankton and fisheries abundance in the marine environment surrounding Cabrillo Port must be included in the Revised DEIR, because (a) it defines the environmental context of the Cabrillo Port project and (b) because of the project's potential contribution to continued zooplankton, fisheries and ecosystem decline in the Southern California Bight. Existing data indicate that impacts caused by Cabrillo Port operations will aggravate an existing problem caused by other industrial operations in the area that involve seawater intake, and by anthropogenic environmental dynamics such as regional and global ocean warming. Because of this context, even relatively minor impacts on egg and larvae distribution and abundance could be significant. The Revised DEIR must analyze the impacts of this project in the context of the surrounding environmental setting and conditions.

*The Revised DEIR Relies on Insufficient Data and Faulty Analysis for its Conclusions on Zooplankton Impacts*

As discussed above, significant problems exist in the Revised DEIR's description of Cabrillo Port seawater intake (including inconsistencies in descriptions of the proposed ballasting systems and omission of intake volumes for the LNG carriers), while failure to consider critical information on the environmental setting of the project results in the Revised DEIR dangerously underestimating the potential impacts to plankton and

G207-203 Continued

G207-203  
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G207-204

Again, the CalCOFI database was used as the most appropriate and available specific source of current ichthyoplankton data for the site. While not specifically required, the lead agencies have caused several original studies, such as the ichthyoplankton analysis, to be prepared to enhance the analysis of the potential environmental impacts of the proposed Project. However, as provided by section 15204, State CEQA Guidelines, "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors."

Further, section 15125(a), State CEQA Guidelines, provides in part, "An EIR must include a description of the physical environmental conditions in the *vicinity of the Project, as they exist at the time the notice of preparation is published...*" (*emphasis added*). The information within the document meets and exceeds this requirement.

G207-204

The 4.17 million gallons (15,785 m<sup>3</sup>) per day of seawater uptake, which is a weighted average, proposed for the Cabrillo Port Project are significantly (orders of magnitude) lower than typical volumes used by other LNG or a power generation facility's cooling systems, both nearshore and offshore and 60% lower than the seawater uptake values presented in the March 2006 EIS/EIR. The results of the analysis indicate that the daily mortality for eggs would be approximately 42,704 eggs and 7,614 larvae per day, representing less than 0.00000019 percent of the 21,464,100,000,000 eggs and 3,824,100,000,000 larvae found within the Project site. Based on the small numbers of these species expected to be entrained in the seawater uptake systems, the impacts on these species would be less than significant (see Section 4.7 for further information on impacts on managed fish species). See Appendix H1 for the ichthyoplankton analysis.

The Ichthyoplankton Analysis is based on current and historical data and conditions within the identified quadrat and source water body. The analysis was conducted in the context of the environmental setting as defined in section 15125(a), State CEQA Guidelines, and conditions and in coordination and in consultation with local experts in the field of ichthyoplankton, hydrology, and fisheries with knowledge and expertise pertaining to the specific local conditions and dynamics of the area. The overall low density of zooplankton potentially entrained and the effort to conservatively assess the losses were based on comparisons to overall plankton

<sup>238</sup>/ Roemmich, D. and J. McGowan, *Climatic Warming and the Decline of Zooplankton in the California Current*. Science, Vol. 267, No. 5202 (Mar. 3, 1995), 1324-1326

<sup>239</sup>/ *Id.*

<sup>240</sup>/ Notably, the Scripps researchers examined the same CalCOFI-generated data sets that the authors of the Revised DEIR and Appendix H1 used to establish a semblance of a biological baseline for the project site; reinforcing the authority and pertinence of the Roemmich and McGowan findings.

<sup>241</sup>/ Helms, Greg. Channel Islands Ecosystem Program Manager, The Ocean Conservancy, Santa Barbara Field Office. Personal Communication via email. May 4, 2006

standing stocks in the Southern California Bight that could be susceptible to entrainment.

fisheries from Cabrillo Port. A lack of critical data and faulty analysis on direct impacts to ichthyoplankton also mars the impact analysis.

After its discussion of Cabrillo Port seawater intake and the associated impact on marine biological communities, the Revised DEIR concludes:

The daily density values determined for the Cabrillo Port Project represent impacts on the fishery populations that can be considered adverse but less than their significance criteria when considered relative to the area potentially impacted by Project activities requiring seawater uptake. (Revised DEIR at p. 4.7-50).

As a basis for this conclusion, the Revised DEIR presents Appendix H1, "Cabrillo Port Ichthyoplankton Impact Analysis." The stated purpose of the study is to assess impacts to zooplankton and provide "additional data and supportive information on the types and densities of ichthyoplankton within the proposed Project area...", such as further characterization of "species and densities of marine organisms, including seasonal and diurnal variations in the local community that could be impinged or entrained as the FSRU takes in seawater." In addition, the study was conducted "to further support the analysis and conclusions in the Draft EIS/EIR." (Revised DEIR at Appendix H1, p. 1).

From the outset, the integrity of the "analysis" or "study" is immediately called into question when the stated purpose is to support pre-existing conclusions (those of the 2004 Draft EIS/EIR). Environmental Impact Reports must comprise independent, objective research and analysis, taking into account comments and questions submitted by the public and other regulatory agencies. In contrast, Appendix H1 appears to represent a veiled *argument* rather than an objective reporting of scientific findings on an assessment of potential impact. As such, its methodologies, findings, results and discussions all must be considered products of *advocacy* (with information selectively included or omitted based on whether it supports a pre-existing position) rather than real analysis, and are thus completely questionable. Basic critique of Appendix H1 reveals why this approach is problematic, and results in dangerous underestimations of impacts to plankton and fisheries in the project area.

For example, significant doubts exist regarding the appropriateness of the "area potentially impacted" chosen in Appendix H1. This "source water body" or "quadrat" chosen by the study investigators— against which plankton density averages and Cabrillo Port seawater volumes are compared— covers approximately 14,000 square nautical miles (nm<sup>2</sup>), with outer (seaward) boundaries reaching from about 60 to 145 nm from the project site (Revised DEIR at Appendix H1, pps. 6-7). The boundaries of this "source water body" appear to be arbitrarily chosen, with little documentation or reasoning to support their immense distances. The Appendix argues that "using a smaller quadrat... would severely limit the density and number of species identified and would not provide an accurate account of the species potentially entrained by the proposed project." (Revised DEIR at Appendix H1, p. 9).

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### G207-205

The analysis was conducted to develop, not validate, the environmental analyses and its conclusions and was based on predictions of annual water circulation both inshore, offshore and near the port. Subsequent to the preparation of the March 2006 Revised Draft EIR, additional experts in the fields of hydrography and fisheries were contacted (see Appendix H) to assist in determining the most accurate source water body for impact assessment. The experts consulted could not, however, with confidence, determine exactly how far from the facility zooplankton would be at risk. It is understood that densities are typically lower in offshore areas, but the analysis considered samples also very close to shore in addition to those in mid-depth waters. The USEPA has indicated in its draft NPDES permit that monitoring will be required.

G207-205

Responses to the letter cited in Footnote 242 from Robert R. Warner are included as 2006 Comment Letter P453.

However, by using such an arbitrarily large quadrat, the “analysis” artificially skews its predicted impacts to zooplankton significantly lower in two ways. First, by establishing a source water body volume that is proportionally many orders of magnitude greater than Cabrillo Port intake volumes, the Revised DEIR can state that Cabrillo Port will intake a meaningless fractional percentage of seawater and zooplankton. Thus, the actual impacts that project operations will have on the marine environment surrounding the FSRU remain hidden. According to Dr. Robert Warner, a professor of marine biology at UC Santa Barbara and an expert on fisheries ecology, this presentation of percentage mortality “...is therefore misleading; it is much clearer to simply state the amount of water that will be directly affected by [Cabrillo Port] operations.”<sup>242</sup>

Second, by including data from several CalCOFI sampling stations located in much deeper water and much further offshore than the Cabrillo Port site (where plankton abundance and densities are generally much lower), the baseline plankton density average generated by the “study” and applied to the Cabrillo Port site is unreasonably low. According to Dr. Warner, “since plankton densities generally increase as samples are taken shallower and nearer shore, the CalCOFI numbers for density *would be an underestimate of the density at the site*” (emphasis added).<sup>243</sup>

It is important to note that Dr. Peter Raimondi, a zooplankton specialist from UC Santa Cruz who was consulted by the authors of Appendix H1, is on record as stating the need for the “study” to include a “discussion of how CalCOFI data provides the correct data set for the project and the ballast water uptakes at 43ft.” He expressed concern that the analysis address “the validity of the source water body,” and that “the % entrainment numbers are meaningful only within the context of the validity of the source water.” (Revised DEIR at Appendix H1, p. H1.1-6).

Unfortunately, Appendix H1 fails to include that recommended discussion, or present a supported validation of the chosen “source water body,” instead relying on the stated assumption that “data from all stations identified... is relevant to determining Project entrainment impacts.” (Revised DEIR at Appendix H1, p. 11). Consequently, the results of the “analysis” remain of both artificially low and of highly questionable pertinence relative to the likely impacts to plankton abundance and fisheries *at the project site*.

An obvious methodology for establishing the validity of the CalCOFI extrapolations and more accurately predicting environmental impacts would be to conduct site-specific ichthyoplankton surveys, and apply this data to a determination of plankton abundance and density at the proposed Cabrillo Port site. This information would significantly enhance the accuracy and completeness of the Revised DEIR.

## G207-205 Continued

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## G207-206

Section 4.7.4 contains updated information on uptake volumes and potential impacts of seawater uptake and discharge on marine biota, including ichthyoplankton from intake of seawater, from thermal discharges of cooling water. The ichthyoplankton impact analysis (Appendix H1) includes both literature results and data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) surveys. CalCOFI surveys have been consistently collected over a period of time and are the best scientific data currently available.

G207-206

Responses to the letter cited in Footnote 242 from Robert R. Warner are included as 2006 Comment Letter P453.

## G207-207

The analysis was conducted to develop, not validate, the environmental analyses and its conclusions and was based on predictions of annual water circulation both inshore, offshore and near the port. Subsequent to the preparation of the Revised Draft EIR, additional experts in the fields of hydrography and fisheries were contacted (see Appendix H) to assist in determining the most accurate source water body for impact assessment. The experts consulted could not, however, with confidence, determine exactly how far from the facility zooplankton would be at risk. It is understood that densities are typically lower in offshore areas, but the analysis considered samples also very close to shore in addition to those in mid-depth waters. Future monitoring efforts proposed at the port will aid in determination of impacts.

G207-207

## G207-208

Site-specific data are not available. After consultation with NOAA and marine biology experts, the use of the CalCOFI database was determined to be appropriate for the purposes of the analyses contained in this EIS/EIR. CalCOFI surveys have been consistently collected over a period of time and are the best scientific data currently available. See response to Comment G207-198.

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<sup>242</sup>/ Warner, Robert R., Professor of Marine Biologic, University of California, Santa Barbara, *Comment letter on Cabrillo Port Revised DEIR*, May 2, 2006.

<sup>243</sup>/ Id.

Strangely, Appendix H1 explicitly rejects procurement of project site specific data based on concerns about the short term duration of such a data set, because of the potential for seasonal plankton fluctuation and for error due to potential anomalous weather such as El Niño events. Continuing, it states: “point-in-time ichthyoplankton sampling at the Project site would result in a very short-term data set, potentially representing as little as one or two seasons and at the most a full year of data.” (Revised DEIR at Appendix H1, pps. 4-5).

This argument fails for several reasons. First, there is no given reason why site-specific data could only represent “at most” one year of data; if the Cabrillo Port applicant aims to demonstrate that impact to marine biological resources will be less than significant due to seawater intake, they retain responsibility to provide sufficient data to do so. Furthermore, short-term (less than two-year) *and site-specific* entrainment/impingement studies are required by Clean Water Act section 316(b) and underway for several California coastal cooling structures, using much smaller study areas to investigate zooplankton impacts. Designed by professional scientists and approved by California’s Regional Water Quality Control Boards, these studies are already yielding important data.<sup>244</sup> For example, the sampling locations for impingement and entrainment studies underway at Redondo Beach Generating Station are all within 2 miles of the intake pipe.<sup>245</sup> Conversely, none of the sampling locations used to estimate impingement and entrainment impacts from Cabrillo Port are within two miles of the proposed project site.

Next, the data set used by the authors is no more than four years in length (Revised DEIR at Appendix H1, p. 11). Compared to the 40-year projected lifespan of the Cabrillo Port facility, the four-year CalCOFI data set the authors rely on could also comprise statistically anomalous data relative to multi-year or multi-decade trends in weather, ocean currents, or other factors influencing plankton productivity and fisheries ecology. The Revised DEIR fails to explain why a four-year data set is sufficient while a one or two year data set would be insufficient, a distinction that may be arbitrary relative to the duration of the proposed project. If four years is a meaningful minimum threshold for a data set and not arbitrary, the Revised DEIR must explain why.

Third, site-specific data should be compared against the gathered CalCOFI data, a process that would help to better explain planktonic dynamics at the site, help illuminate the validity of the selected source water body and calibrate the generated plankton density averages. Thus the addition of site-specific data would only enhance the zooplankton impact assessment. The current deficiency in data and analysis in the Revised DEIR indicates that such enhancement is necessary.

Finally, the reliance on the coarse and highly distributed CalCOFI data (the nearest CalCOFI sampling locations used are over 15 nm from the proposed project site, with

<sup>244</sup>/ Abramson, Sarah, staff scientist, and Heather Hoecherl Esq., Director of Science and Policy. May 1, 2006. Comment Letter on Cabrillo Port Revised DEIR, Heal the Bay, Santa Monica, CA.

<sup>245</sup>/ Id.

## G207-208 Continued

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### G207-209

The most recent post-2000 data was used for current accuracy of conditions near and densities within the Bight because this period reflects the most appropriate ichthyoplankton assemblages reflective of current hydrodynamic and meteorological conditions. See response to Comment G207-198.

### G207-210

Site-specific data are not available. After consultation with NOAA and marine biology experts, the use of the CalCOFI database was determined to be appropriate for the purposes of the analyses contained in this EIS/EIR. CalCOFI surveys have been consistently collected over a period of time and are the best scientific data currently available. See response to Comment G207-198.

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some sites around 100 nm away [Revised DEIR at Appendix H1, p. 14]) may mask important site specific ecological dynamics that could be unusually impacted by Cabrillo Port operations. Because the ichthyoplankton “study” extrapolates from data gathered at remote sites, the results of this analysis fail to reflect any *site-specific* impingement and entrainment impacts of the proposed project.

For example, the proposed project site may be subject to periodic pulses of eggs and larvae produced within the Santa Barbara Channel and carried eastward along the California Current. Reproduction of groundfish, and in particular the *Sebastes* (Pacific Rockfish) complex, is known to be characterized by infrequent, periodic events of intense egg and larvae production. Rockfish may go many years between successful recruitment events, yet this species group is entirely reliant on the success of these events for persistence. In the context of dramatic recent declines, impacts to these recruitment events could be highly significant. Site specific, repeated and intensive surveys are required to assess the potential impact of the proposed project in this subject area.<sup>246</sup> Given that the proposed Cabrillo Port site is within 1.52 nm of the Cowcod (*Sebastes levis*) Conservation area (Revised DEIR at p. 4.7-11), the need to capture and assess data on these spontaneous, pulse-type reproduction and recruitment events is particularly important.

*The Revised DEIR Fails to Disclose Potential Conflict of Interest in Its Supporting Documents*

The Revised DEIR contains several other errors in its analysis of zooplankton impacts, which further contribute to the inadequacy of the document. Unfortunately these erroneous or misapplied data and unsubstantiated assumptions appear to be purposefully included to downplay the potential for the proposed project to cause significant impact to zooplankton and fisheries.

First, the Revised DEIR presents findings from what it claims was “an independent evaluation of the technical work that has been done to date in assessing ichthyoplankton impacts from LNG terminals.” (Revised DEIR at p. 4.7-49). Several findings highly critical of USCG assessments are cited, including the statements that “actual impacts would be substantially less than the impacts predicted in the USCG environmental analysis”; that “conclusions that impacts would be minor are very conservative, and can be used for licensing decisions with appropriate recognition given to the degree of conservatism”; and that “lack of information and inherent uncertainties associated with mortality rates of key fish species, the analyses are highly conservative in their conclusions.” (Id.) In sum, these findings support the Revised DEIR’s conclusions that the proposed Cabrillo Port seawater intake will not have a significant impact on zooplankton or fisheries, because the existing assessment methodologies result in overestimates of plankton abundance and the potential for impact from LNG facilities.

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G207-211

The discussion of the 2005 Exponent study has been removed from Section 4.7 because other information was considered to be more relevant.

G207-211

<sup>246</sup>/ Helms, Greg, Channel Islands Ecosystem Program Manager, The Ocean Conservancy, Santa Barbara Field Office. Personal Communication via email. May 4, 2006.

This unusual critique of USCG zooplankton impact analysis in the Revised DEIR is supported by a reference to a study entitled “An Evaluation of the Approaches Used to Predict Potential Impacts to Open Loop Vaporization Systems of Fishery Resources of the Gulf of Mexico,” conducted by the Exponent corporation in 2005 (“Exponent 2005”). In and of itself, application of this study to the Cabrillo Port impact analysis is problematic. As the title indicates, the study refers to impacts from open loop vaporization systems at LNG terminals, while Cabrillo Port as described in the Revised DEIR does not feature an open loop system. Also, the environmental assets discussed are the fishery resources of the Gulf of Mexico, an oceanic region with a significantly different suite of fish species and ecosystems. If the Revised DEIR will rely on the findings of Exponent 2005 for its analysis, it must clearly explain how this assessment of methodologies that gauge impacts from open loop vaporization on Gulf of Mexico fishes is pertinent to the Cabrillo Port, a proposal featuring submerged combustion vaporization and sited in the Pacific Ocean. If it cannot explain the relevance, then the findings of this study are not appropriate for inclusion in the Revised DEIR.

In addition to the scientific relevance of Exponent 2005, grave questions of the integrity of the Revised DEIR are raised by its description and citation of the study. Despite relying heavily on the findings from Exponent 2005, the Revised DEIR fails to disclose that the study was in fact *not* independent as claimed, but rather explicitly contracted by The Center for Liquefied Natural Gas,<sup>247</sup> an LNG advocacy group that, according to its own website, comprises “...more than 50 members, including LNG asset owners and operators, gas transporter and natural gas end users... committed to market-based policies and the importance of expanding and diversifying natural gas supplies.”<sup>248</sup> Furthermore the only address provided for The Center for Liquefied Natural Gas is in care of Hunton & Williams in Washington D.C.,<sup>249</sup> an “energy practice” law firm that defends and litigates on behalf of energy corporations such as Georgia Power Company, ExxonMobil, and Duke Energy.<sup>250</sup> That parties that may stand to directly benefit from permitting of Cabrillo Port (i.e. LNG “asset owners,” operators and transporters) are associated with the production of this private, non-peer reviewed study indicates a distinct *lack* of independence of research (i.e. a commercial *dependence* on the findings) and thus a strong suggestion of a conflict of interest in the environmental review process.

The Revised DEIR for Cabrillo Port must present the best and most objective analysis of the potential impacts; it must rely on independent scientific experts and the findings from

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<sup>247</sup>/ The Center for Liquefied Natural Gas. Webpage: Newsroom>“Offshore LNG Project Impacts on Marine Life Assessed to be Minimal.” Press release January 17, 2006. Viewed at <http://www.lngfacts.org/newsroom/011806.html>. May 7, 2006.

<sup>248</sup>/ The Center for Liquefied Natural Gas. Webpage: “About Us.” Viewed at [http://www.lngfacts.org/about\\_us/index.html](http://www.lngfacts.org/about_us/index.html). May 7, 2006.

<sup>249</sup>/ The Center for Liquefied Natural Gas. Webpage: “Join Us.” Viewed at [http://www.lngfacts.org/join\\_us/index.html](http://www.lngfacts.org/join_us/index.html). May 7, 2006.

<sup>250</sup>/ Hunton & Williams LLP. Webpage: “Home/Industries/Energy.” Viewed at [http://www.hunton.com/industries/industry\\_detail.aspx?in\\_H4ID=23](http://www.hunton.com/industries/industry_detail.aspx?in_H4ID=23). May 7, 2006.

peer-reviewed scientific research whenever possible. From this standpoint alone it may be inappropriate for the Revised DEIR to rely so extensively on the results of the Exponent 2005 study, without considering or discussing other peer-reviewed research. From the standpoint of general ethics and maintaining an acceptable level of integrity in the environmental review process, it is completely unethical for the Revised DEIR to rely on the Exponent 2005 findings without explicitly disclosing the vested commercial interests associated with production of the research.

*The Revised DEIR Makes Irrelevant and Misleading Comparisons to Coastal Power Plants*

In an attempt to downplay the impact that Cabrillo Port seawater intake will have on plankton and fisheries, the Revised DEIR compares projected intake volumes at Cabrillo Port with those of “other LNG or power generation facility’s cooling systems [sic].” (Revised DEIR at p. 4.7-47). It is already known that these facilities (such as power plants at Diablo Canyon and Ormond Beach) cause immense harm to the marine environment, including heavy mortality of an array of vertebrate and invertebrate species, including larval and full grown fish, sea turtles, and even pinnipeds.<sup>251</sup> For the Revised DEIR to conclude that impacts will be negligible and that further analysis is not necessary simply because Cabrillo Port will have a lower intake rate than other highly destructive facilities is illogical and negligent; though Cabrillo Port may well intake less than other California cooling structures, such comparison is irrelevant to the Revised DEIR’s purpose of identifying, assessing and, if needed, mitigating the actual impacts that Cabrillo Port will have on the surrounding environment. The fact that other intake structures cause significant harm to the marine environment does not free the project applicant from doing harm.

As discussed in this comment letter (and those of other organizations and individuals), major gaps exist in the current Revised DEIR analysis which cast serious doubt on the document’s estimated quantifications regarding both intake and plankton densities, and thus the document’s essential conclusions. The CSLC and USCG must uphold their legal obligation to accurately and completely assess and report the implications of the Cabrillo Port proposal, not simply try to duck their responsibility with irrelevant comparisons.

*The Revised DEIR Fails to Adequately Discuss Impacts from Thermal Discharge*

As discussed in this comment’s Water Quality and Sediments section, Cabrillo Port’s proposed thermal discharges will violate State and Federal water quality laws and objectives, triggering the significance criteria and thus requiring mitigation in either volume or temperature. As acknowledged in the Revised DEIR, elevating the temperature of receiving waters through discharge of thermal waste can cause serious harm to, and alteration of, existing biological communities. (Revised DEIR at p. 4.7-50).

<sup>251</sup>/ Abramson, Sarah, staff scientist, and Heather Hoecherl Esq., Director of Science and Policy. May 1, 2006. Comment Letter on Cabrillo Port Revised DEIR, Heal the Bay, Santa Monica, CA.

G207-211 Continued

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The information cited was presented to provide a context in which the seawater uptake of the proposed Project could be viewed relative to the seawater uptake of other energy facilities. The document does not base its assessment of the potential impacts of the proposed Project on a comparison with such facilities, but, as indicated on the cited page, in its own right as required under law. The USEPA has declined to establish limits for intake at DWPA ports, since the number of ports that might be built was considered too speculative. Also, as a consequence of the Revised Draft EIR, the Applicant has made extensive modifications to reduce water use and subsequent impacts to zooplankton resources.

G207-212

G207-213

The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. The previously proposed FSRU generator engine cooling system used seawater as the source of cooling water for the four generator engines. The Applicant now proposes using a closed tempered loop cooling system that circulates water from two of the eight submerged combustion vaporizers (SCVs) through the engine room and back to the SCVs, which reduces the seawater intake volume by about 60 percent. The seawater cooling system would remain in place to serve as a backup system during maintenance of the SCVs or when the inert gas generator is operating. Section 2.2.2.4 contains a description of the proposed uptakes and water uses for the FSRU.

Section 4.7.4 contains information on uptake volumes and potential impacts of seawater uptake and discharge on marine biota, including ichthyoplankton from intake of seawater, from thermal discharges of cooling water. The ichthyoplankton impact analysis (Appendix H1) includes both literature results and data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) surveys. CalCOFI surveys have been consistently collected over a period of time and are the best scientific data currently available.

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Unfortunately, the impact of Cabrillo Port thermal discharges does not appear to be adequately described in the Revised DEIR. First, a table is presented (Table 4.7-8 “Seawater Uptake Volume”) stating that more than 2.3 billion gallons per year of seawater will be taken in and discharged. (Revised DEIR at p. 4.7-48.) Later, however, the analysis refers to discharge plume dispersion modeling for two different scenarios, apparently resulting in two different discharge rates for thermal waste: the production of 800 million standard cubic feet per day (MMscfd) of vaporized LNG, and 1200 MMscfd, the “future/maximum design case.” (Revised DEIR at p. 4.7-50.) The Revised DEIR must clearly state the proposed discharge rates of thermal waste for both of the “design cases” and discuss when and how the thermal discharge rates would change.

Second, though the Revised DEIR states that “existing plankton communities may be affected by the proposed discharge...” it concludes “Based on the low ichthyoplankton densities identified in the ichthyoplankton analysis and the discharge plume dispersion modeling results showing quick dispersion, it is not anticipated that any significant changes in ambient water temperature would persist or cause impact... within the thermal discharge plume.” (Revised DEIR at p. 4.7-51). This conclusion is problematic for the following reasons:

As discussed above, the “low ichthyoplankton densities” established for the project site are based on faulty extrapolations from data sets generated from deeper, further offshore trawl sites. Without detailed *site-specific* assessment of existing marine populations, it is impossible to establish baseline conditions, let alone assess potential project impacts to these populations.” Consequently, the conclusion that “low ichthyoplankton densities” exist at the site is insufficient for predicting environmental impact.

The “discharge plume dispersion modeling” relied upon to make the conclusion is not readily available for public or expert review. Similar to other supplemental analyses which are properly attached to the Revised DEIR as appendices, this dispersion modeling study has significant implications for the marine environment and biological resources at the project site. Unfortunately, it was not included as a Revised DEIR appendix. To validate both the document’s assumptions and conclusions, this modeling study must be provided for independent scrutiny to ensure that its results are credible and reliable for assessing potential impacts to marine biological communities.

In conclusion, the Revised DEIR fails to adequately address potential impacts to zooplankton and the affected ecosystem.

***The Revised DEIR Fails to Provide Information Obtained through Consultation with the USFWS and NOAA Fisheries***

The Revised DEIR states that consultations with the USFWS and NOAA Fisheries are “in progress.” (Revised DEIR, section 4.7.2., p. 4.7-35.) Such consultations are required by the federal Endangered Species Act (ESA), which mandates that federal actions do not

G207-213 Continued

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G207-214

See the response to Comment G207-202.

The analysis was conducted to develop, not validate, the environmental analyses and its conclusions and was based on predictions of annual water circulation both inshore, offshore and near the port. Subsequent to the preparation of the March 2006 Revised Draft EIR, additional experts in the fields of hydrography and fisheries were contacted (see Appendix H) to assist in determining the most accurate source water body for impact assessment. The experts consulted could not, however, with confidence, determine exactly how far from the facility zooplankton would be at risk. It is understood that densities are typically lower in offshore areas, but the analysis considered samples also very close to shore in addition to those in mid-depth waters.

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G207-215

Appendix D6 contains revised information on the discharge plume dispersion modeling.

G207-215

G207-216

The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. The previously proposed FSRU generator engine cooling system used seawater as the source of cooling water for the four generator engines. The Applicant now proposes using a closed tempered loop cooling system that circulates water from two of the eight submerged combustion vaporizers (SCVs) through the engine room and back to the SCVs, which reduces the seawater intake volume by about 60 percent. The seawater cooling system would remain in place to serve as a backup system during maintenance of the SCVs or when the inert gas generator is operating. Section 2.2.2.4 contains a description of the proposed uptakes and water uses for the FSRU.

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Section 4.7.4 contains information on uptake volumes and potential impacts of seawater uptake and discharge on marine biota, including ichthyoplankton from intake of seawater and, from thermal discharges of cooling water. The ichthyoplankton impact analysis (Appendix H1) includes both literature results and data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) surveys. CalCOFI surveys have been consistently collected over a period of time and are the best scientific data currently available. See preceding response also.

G207-217

Section 4.7 and Appendix I have been updated to reflect the status of the ongoing Section 7 ESA consultation for threatened and endangered marine species.

“jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.”<sup>252</sup>

From the information provided in Appendix I of the Revised DEIR, it appears that the ESA consultation has barely progressed beyond initial steps. It is not even clear whether the exchange of species lists – the first step in the consultation process – has occurred for marine biological resources. Appendix I does not include any correspondence from NOAA Fisheries.

No biological assessment is included in Appendix I either. The purpose of the biological assessment is to identify whether the proposed project “may affect” federally listed species. As explained by the USFWS, the “may affect” determination is *not* equivalent to a determination under CEQA or NEPA that the project would not have significant adverse affects. (Revised DEIR, App. I, Dec. 20, 2005 Letter from USFWS to USCG.) In addition, depending on the outcome of the biological assessment, additional consultation may be required, including, potentially, the preparation of a “biological opinion,” which would formally evaluate whether the project is likely to jeopardize a federally listed species or impact its critical habitat.

The biological assessment and any subsequent analysis carried out pursuant to the ESA are significant steps in evaluating project impacts to listed species. As such, it is quite possible that, as these steps in the consultation process are completed, additional new information regarding the Cabrillo Port project’s impacts to species will be identified. Such information would also be relevant to evaluating marine biological resource impacts under CEQA and NEPA.

#### 4.8 BIOLOGICAL RESOURCES – TERRESTRIAL

The discussion of terrestrial biological resources in the Revised DEIR violates CEQA because the analysis:

- Fails to adequately describe and in some cases improperly defers identification of the existing biological baseline;
- Defers analysis of some biological effects until after public CEQA environmental review;
- Defers the formulation of mitigation measures for some biological impacts until after public CEQA environmental review;
- Fails to analyze consistency with specific relevant local and state plans and policies for the protection of biological resources.

While some biological surveys have been conducted in response to EDC’s comments on the original DEIS/EIR, these remaining defects frustrate effective impact analysis and make it impossible for the public, other agencies, and decision-makers to determine what

#### G207-217 Continued

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G207-218  
See preceding response.

G207-218

G207-219  
The EIS/EIR stands as the Biological Assessment for the proposed Project, as specified by a Memorandum of Agreement between the USCG and NOAA Fisheries and the USFWS. It reflects the most current status of consultation. As such, it also contains determinations on whether each federally listed species is likely or not to be adversely affected, including relevant mitigation measures that may have played a part in these determinations. Appendix I contains correspondence related to ongoing ESA consultation. Further, the document recognizes that additional conditions may be applied to the Project as part of its subsequent consideration by regulatory agencies, e.g., the USACE.

G207-219

G207-220

Responses to each of the summary statements are provided within the context of the detailed comments submitted regarding each of the respective issues.

G207-220

The Applicant has completed surveys of the pipeline rights-of-way in accordance with California Department of Fish and Game protocol. Section 4.8 contains the results of these surveys. Where surveys were not completed, Section 4.8.4 of the EIS/EIR assumes the presence of any potentially affected species, evaluates potential impacts, and identifies mitigation measures. Additional preconstruction plant and wildlife surveys, specific to the final construction timeline and designated pipeline alignment, would be completed for special status species, federally listed species, or California protected species specified by the USFWS or the CDFG, to minimize the potential for causing mortality of local wildlife. However, for purposes of the impact analyses and resultant mitigation, all relevant species are presumed to exist in the vicinity of the proposed Project.

Mitigation measures for each significant impact are stipulated throughout the EIS/EIR and those that require future products, e.g., the Biological Resource Mitigation Implementation and Monitoring Plan, contain a listing of topics that must be addressed. These requirements are performance standards by which such plans would be evaluated when it is practical to prepare them. Under the CEQA, mitigation measures “may specify performance standards which would mitigate the significant effect of the project and which

<sup>252</sup>/ 16 U.S.C. § 1536(a).

may be accomplished in more than one specific way." (State CEQA Guidelines section 15126.4(b)). NEPA does not require performance measures for proposed mitigation but only requires mitigation measures to be identified (40 CFR 1502.14(f) and 1502.16(h)). The various Federal and State permits (e.g., CWA, Section 404, Streambed Alteration Agreement) required for the Project may contain additional conditions as a component of that permit. In such cases the issuing agency would be responsible for ensuring compliance. Permits may not be granted until the NEPA and CEQA processes have been completed and the lead agencies have acted on the Project, in part because agencies rely on the analysis included in the EIS/EIR.

impacts the proposed action will have, how these impacts are mitigated or avoided, and whether there are other feasible alternatives to the proposed action. Accordingly, the revised DEIR must be revised and recirculated to provide this missing information in order to meet the basic requirements of CEQA.

#### 4.8.1 Environmental Setting

The Revised DEIR fails to describe the existing, baseline biological resources (including habitats and species) sufficiently to facilitate an assessment of how the proposed action may impact those resources. Under CEQA, an EIR must describe the physical environmental conditions, as they exist in the vicinity of the project at the time the CEQA Notice of Preparation is issued or when environmental review is otherwise commenced.<sup>253</sup> The description of the baseline setting must include enough information for readers to understand what resources might be significantly affected by the proposed project and the alternatives. However, in this case, the description of the environmental setting is inadequate and as a result the significant environmental effects remain unknown to readers of the DEIR.

#### *Biological Surveys*

The Revised DEIR notes that “[f]ull survey protocols could not be met for the June and early July 2005 surveys because methods require appropriate time periods and frequently repeated surveys before a species can be considered absent from a project area.” (Revised DEIR p. 4.8-2.) The lead agency did not take the time needed to undertake biological surveys that meet established California Department of Fish and Game (CDFG) and/or USFWS protocol and thus has not prepared an adequate Environmental Setting for evaluating biological impacts. Instead, the Revised DEIR was released before adequate biological surveys could be taken.

As a result of not having undertaken adequate surveys to ascertain the location of all significant biological resources, the applicant proposes pre-construction surveys *after project approval* to identify biological resources that could be impacted (see e.g., AM TerrBio-2a on page 4.8-54 and AM TerrBio-2b on page 4.8-55). However, CEQA requires that an EIR identify the resources such as specific rare species that could be impacted and where they occur in relation to the project so that the lead agency can determine whether impacts are significant and unavoidable, significant and mitigable, or less than significant. For this reason, CEQA requires that an EIR disclose the physical environmental conditions as they exist at the time the notice of preparation is published. By deferring adequate surveys until after the EIR is certified and the project approved, important environmental information is not disclosed at a meaningful point in the process. There is thus no way to determine through the public EIR process whether adverse impacts to each sensitive species can be avoided and thus whether impacts are significant or less than significant pursuant to the Significance Criteria set forth on page

G207-220  
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<sup>253</sup>/ CEQA Guidelines §15125(a).

4.8- 47 in the Revised DEIR. Therefore, surveys complying with established CDFG and USFWS protocol for all potentially impacted rare species should be completed and the Terrestrial Biological Environmental Setting should be updated accordingly before a new Revised DEIR is recirculated.

In addition, prior and future surveys for rare species should not be limited to the right-of-way (ROW) and should include areas adjacent to the ROW. Presence in the areas next to the ROW indicates potential and likely presence in the ROW.

### ***Wetlands***

The Revised DEIR states (p. 4.8-2 – 4.8-3) that a wetland delineation survey “identified all wetlands.” According to the Revised DEIR, wetlands and “waters of the U.S.” were identified “according to the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual.” (Revised DEIR at p. 4.8-4.) However, other agencies with jurisdiction over this project define wetlands more broadly. For an area to be a wetland under the USACE’s definition, it must meet *each* of three parameters (wetland soil, wetland plants and wetland hydrology). However, other agencies - including CDFG and California Coastal Commission (CCC) - apply a more liberal and geographically appropriate definition of wetlands, which requires only that an area must meet *at least one* of the three criteria to be considered a wetland. The Revised DEIR includes these wetlands only “along the coastline,” (Revised DEIR at p. 4.8-13), despite the fact that CDFG applies this broader standard throughout the project site. Since the Revised DEIR excludes all areas that meet only one or two criteria from the majority of the project area, it does not provide a complete and accurate description of the wetland baseline.

Moreover, the Revised DEIR expressly adopts Significance Criteria (Revised DEIR at p. 4.8-47) that acknowledge that causing “a substantial permanent adverse effect on *wetland*, riparian, or other sensitive habitat identified in local or regional plans, policies or regulations, *or by the CDFG*, USFWS or NOAA Fisheries” is a significant biological impact. (Emphasis added.) Additionally, another Significance Criterion states that adverse impacts to habitats (including wetlands) that are “recognized specifically as biologically significant in local, State, or Federal policies, statutes, or regulations” are significant impacts. (Revised DEIR at p. 4.8-47.) Therefore, the Revised DEIR is remiss and flawed for not considering wetlands that meet CDFG and USFWS definition of wetlands as part of the biological baseline for the entire project area (not just along the coastline).

### ***Sensitive Plant and Wildlife Species and California Natural Diversity Data Base***

The Revised DEIR relies on the California Natural Diversity Data Base (CNDDDB) to identify sensitive plant (pp. 4.8-27 and 4.8-34) and wildlife (p. 4.8-14) species to be surveyed. However this Data Base is not complete and may exclude rare species. The CNDDDB contains a disclaimer about its utility for CEQA documents which states, in part, “while the information is complete and accurate to the best of our knowledge and ability,

## **G207-220 Continued**

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### **G207-221**

The Applicant has completed wetland delineations using Army Corps of Engineers definitions and California Coastal Commission and California Department of Fish and Game wetland definitions (where appropriate) for the proposed pipeline routes, both within and without the “coastal zone.” Section 4.8.1 presents a discussion of baseline wetland conditions from these wetland delineations.

G207-221

### **G207-222**

The sensitive plant and wildlife species discussed in Section 4.8 were compiled from both queries of the CNDDDB and in consultation with the USFWS and CDFG.

The Applicant has completed surveys in accordance with California Department of Fish and Game protocol. Where surveys were not completed, the EIS/EIR assumes the presence of any potentially affected species, evaluates potential impacts, and provides appropriate mitigation to avoid or sufficiently reduce potential impacts and mitigation accordingly.

The need for additional pre-construction surveys has been stated in Section 4.8, and appropriate state and Federal agencies will determine which surveys are needed. It is widely known and accepted that the exact location of a sensitive species or habitat is kept confidential for protection of the species or habitat, and as such will not be published in a public document. Maps showing general locations of sensitive habitats are included in Section 4.8.

G207-222

it does not constitute an official response from any state agency and will not itself meet the requirements of ... [CEQA]. Information supplied is based on the material available at the time of request and should not be regarded as complete data on the elements or areas being considered.”

Site-specific surveys for sensitive species identified in the CNDDDB have been conducted, but as acknowledged in the Revised DEIR, have not met all established survey protocols regarding timing and frequency of surveys and according to the Revised DEIR cannot rule species absent. (Revised DEIR at p. 4.8-2.) In addition to the failure to adhere to the protocol, these surveys were limited to species occurring in the incomplete CNDDDB.

Measure AM TerrBio-2b requires preparation of a map showing the location of all special status plants, wildlife, important nesting areas, and wetlands to be used during necessary vehicle travel to avoid these areas. This type of map is precisely what is supposed to be in the Revised DEIR to depict the baseline environmental setting and facilitate analysis of impacts. This map should be prepared and included as part of the Environmental Setting section so that the public, other agencies and decision-makers can be informed of the occurrence and location of important biological resources potentially impacted by this project and so that the Revised DEIR’s impact analysis can be based on a complete and accurate environmental baseline.

#### ***Deferral of Identification of Baseline Riparian Habitat Conditions***

Similarly, MM TerrBio-2f defers identification of the baseline riparian habitat. It defers marking on maps which riparian areas will be avoided and which will be removed. By deferring this information to later in the process, without any standards to identify which areas will be avoided, the Revised DEIR violates CEQA’s requirements to identify the existing environmental setting and to identify feasible, effective and enforceable mitigation measures.

#### ***Inconsistent Descriptions of Potential Occurrence of Rayless Ragwort***

The Revised DEIR confuses the reader regarding the presence of Rayless Ragwort, a California Native Plant Society (CNPS) List 2 special status plant species. On one hand it finds that this species is known to occur along the ROW between MP 2.0 and 5.0 based upon the CNDDDB, but on the other hand finds that this species has not been observed since 1901. The Revised DEIR should be revised to accurately and consistently describe the biological baseline.

#### ***Inability to Survey Private Property in Project Area***

The lead agency’s reported failure to survey certain private properties because landowners would not allow access is an inadequate excuse for the Revised DEIR’s Environmental Setting to be incomplete. If the project is proposed on this private land it must be surveyed to establish the environmental baseline for the Revised DEIR’s impact

#### **G207-222 Continued**

G207-222  
Continued

#### **G207-223**

Riparian vegetation types within the corridor evaluated are shown on Figures 4.8-5, 4.8-6 and 4.8-7 for the proposed Line 225 Pipeline Loop along with other vegetation types. Vegetation types for the proposed Center Road Pipeline are shown on Figures 4.8-1a and 4.8-1b.

#### **G207-224**

Again, the document, in the interest of full disclosure, reveals both the extent of historical knowledge and current resource status.

Section 4.8.4 contains revised text on potential impacts on terrestrial biological resources and mitigation measures to address such impacts.

#### **G207-225**

The Applicant has completed surveys of the pipeline rights-of-way in accordance with California Department of Fish and Game protocol. Surveys included a wetland delineation survey that meets the California Coastal Commission and California Department of Fish and Game wetland definition, botanical and wildlife surveys for Federal and State listed species, a wintering waterfowl survey, a burrowing owl survey, and surveys to determine whether any oak trees would need to be removed during construction. Section 4.8 contains the results of these surveys, and Section 4.8.4 contains mitigation measures. Additional preconstruction plant and wildlife surveys, specific to the final construction timeline and designated pipeline alignment, would be completed for special status species, federally listed species, or California protected species specified by the USFWS or the CDFG, to minimize the potential for causing mortality of local wildlife. However, for purposes of the impact analyses and resultant mitigation, all relevant species are presumed to exist in the vicinity of the proposed Project.

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G207-225

analysis before the EIR can be certified and a project approved. If the landowner is not cooperative then the project as defined may not be feasible; otherwise the owner must enable environmental review to occur because no project can be approved without a certified EIR.

#### 4.8.1.3 Santa Clarita Valley Line 225 Pipeline Route Description

The description of the proposed pipeline route lacks details necessary to ascertain the significance of impacts to biological resources. For instance, the applicant has not determined whether horizontal direction drilling (HDD) would be used to cross the Santa Clara River. The Revised DEIR defers identification of project elements by noting that “[d]epending on final engineering design, instead of crossing the Santa Clara River within the bridge, HDD may be employed.” (Revised DEIR at pp. 4.8-28 and 2-78.) Therefore the Revised DEIR lacks the information needed to accurately describe this project element and thus to determine if this crossing will cause significant impacts. Unarmored Threespine Stickleback, a Federal endangered species and State “fully protected” species, exists in the Santa Clara River, and could be significantly impacted by the crossing if HDD is used. The presence of this species makes it important for the Revised DEIR to describe the crossing method to be used and to not defer description of this significant project element until a point in time after EIR certification when the lead agencies decide what crossing method to use.

#### 4.8.3 Significance Criteria

The DEIR excludes six Significance Criteria (Revised DEIR at pp. 4.8-47 – 48), purportedly because they are not applicable to the project as designed. However, these criteria are applicable and should be included to assist in identification of significant impacts.

For example, the second criterion on page 4.8-48, that the project “would not disturb a substantial vegetation type within the local region to the point where natural or enhanced regeneration would not restore the resource to pre-disturbance conditions in at least three years,” is applicable. While the Revised DEIR claims that “[a]ll areas that would be disturbed by pipeline construction would be returned to the original conditions by implementing revegetation and restoration efforts to comply with permit stipulations and conditions,” no element of the project description or mitigation measures require restoration of the large but still unspecified areas of chaparral, coastal sage, and oak and riparian woodlands to pre-existing conditions within three years. The chaparral takes longer than three years to reestablish and nothing in the Revised DEIR finds that chaparral or coastal sage will be actively restored or even allowed to recover in the ROW.

In addition, the third criterion is found not to apply in part because the Line 225 Pipeline would be installed across rivers within bridges. However, as noted above, the lead agency has found that HDD may be employed instead (Revised DEIR at p. 4.8-28),

#### G207-225 Continued

G207-225  
Continued

#### G207-226

Terrestrial biological resources were evaluated within a pipeline corridor that would include both the construction and permanent rights-of-way. Even though the precise alignment of the pipeline within the corridor would not be determined by SoCalGas until final engineering design, the impacts of any potential pipeline alignments within the corridor have been evaluated.

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#### G207-227

Tables 4.18-5 and 4.18-6 in Section 4.18 (Water Quality) describe crossing methods for each waterbody on the proposed Center Road Pipeline and the Line 225 Pipeline Loop.

#### G207-228

We believe the noted exclusions are supportable as indicated below.

G207-228

Second criterion: All areas that would be disturbed by pipeline construction would be returned to their original condition by implementing revegetation and restoration efforts to comply with permit stipulations and conditions. In the event that restoration efforts fail or would exceed the 3-year timeframe to return to pre-construction conditions, the restoration plan that will be developed for the habitat impacts would have success criteria and contingency measures if restoration goals and objectives were not meet.

Third criterion: The Project would not cause a potential public health hazard through the use, production, or disposal of materials that pose a hazard to wildlife or fish populations in the area. The HDD drilling fluids are not considered hazardous waste or hazardous materials. If the alternative route for the Line 225 Loop were selected and the HDD construction method was used, the significance criterion for water quality and sediments (see Section 4.18.3) would apply to address any impacts.

Sixth criterion: Installation of the pipeline regarding water crossings may use temporary cofferdams if there is a surface water flow during the time of construction. However, construction would be timed during months when surface water flow is expected to be minimal or nonexistent, thus reducing the probability that temporary cofferdams would be needed. San Francisquito Creek is a wildlife migratory corridor but the final installation of the project would not impede any wildlife movement because the pipeline would be

installed within or under existing bridges during times of very low or no surface water flow.

raising the distinct possibility of a drilling fluid leak into the riverbed home of rare and endangered fish and amphibians.

The sixth criterion may also apply because cofferdams (discussed as ways to reduce impacts to the creek, Revised DEIR at p. 2-78) may impede native fish migration. Moreover, contrary to the statement on pp. 4.8-48 – 49, the Revised DEIR does describe San Francisquito Creek as a migratory corridor (Revised DEIR at p. 4.8-34).

#### 4.8.4 Impact Analysis

Rather than analyzing and disclosing the project's impacts on biological resources, the Revised DEIR defers identification of certain biological impacts to a later time. By deferring a complete description of the project and baseline conditions, the Revised DEIR is unable to fulfill its primary purpose – identifying significant environmental impacts so they can be avoided or mitigated.

##### *Deferral of Identification and Analysis of Impacts to Sensitive Biological Resources*

Measure AM TerrBio-2b, defers identification of all sensitive biological resources to be impacted, avoided or mitigated to the future preparation of the "Biological Resources Mitigation Implementation and Monitoring Plan." (BRMIMP) By deferring rather than including this essential task – the environmental impact analysis for sensitive biological resources - the Revised DEIR is deficient. This type of impact analysis must occur during the public review of the DEIR.

##### *Deferral of Identification of Tree Removal Impacts*

As another example of deferred environmental analysis, the Revised DEIR does not identify the total number of trees, linear feet of tree rows or acreage of trees to be removed by the proposed project and alternative pipeline routes. Maximum possible linear footages of tree rows to be removed were provided for the project's Center Road Pipeline component and its alternatives in Revised DEIR Table 4.8-6, but a final decision on the length of tree rows to be removed for each alternative is explicitly deferred until after further engineering studies. Without knowing the length of tree rows to be removed for the project and each alternative, it is not possible to accurately classify or compare their impacts to tree rows to fulfill CEQA's requirements. Instead, this impact is to be determined later, after the public CEQA environmental review period has ended. Such deferral of impact determinations violates CEQA, because, even with promises of mitigation i.e., MM TerrBio-2g ("Tree Avoidance and Replacement"), there is no way to ascertain in the Revised DEIR or during the public CEQA process if this impact is significant or not, or whether the proposed mitigation is feasible, sufficient and effective.

#### G207-228 Continued

G207-228  
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#### G207-229

The Applicant has completed surveys in accordance with California Department of Fish and Game protocol. Where surveys were not completed, the EIS/EIR assumes the presence of any potentially affected species, evaluates potential impacts, and provides appropriate mitigation to avoid or sufficiently reduce potential impacts and provides appropriate mitigation to avoid or sufficiently reduce potential impacts.

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#### G207-230

To the contrary, the maximum linear feet of trees that could be removed were reported in Table 4.8-6 of the March 2006 Revised Draft EIR and this maximum was used to determine the impact severity and mitigation measures.

G207-230

### ***Deferral of Identification of Impacts and Mitigation to Riparian Habitat***

Similarly, the Revised DEIR's impact analysis and discussion and MM TerrBio-3a and TerrBio-2f fail to identify which areas of riparian habitat, protected as sensitive by CDFG and CCC, will be avoided and which areas will be protected. Similarly, Table 4.8-7 "Vegetation Communities along the Line 225 Pipeline Loop and its Alternatives" does not present the acreages of vegetation communities present or to be impacted. The Revised DEIR fails to map areas of riparian habitat to be removed or give an acreage total or even estimate. Instead, the lead agencies again defer the impact analysis and the development of effective, enforceable mitigation measures to a later time, after the public CEQA process is over. MM TerrBio-2f explicitly defers mitigation by promising to consult with CDFG rather than prescribing necessary mitigation in the Revised DEIR as CEQA requires. The Revised DEIR defers mitigation for riparian habitat by failing to specify which areas would be avoided and how restoration will mitigate loss of riparian areas that cannot be avoided, and by deferring criteria for success of riparian restoration (Revised DEIR at p. 4.8-59). Without information regarding which riparian areas will be avoided, how restoration would proceed, and what constitutes successful mitigation, the Revised DEIR is deficient. These mitigation measures are ineffective and unenforceable because they do not specify standards to identify which riparian habitats are to be avoided.

### ***Incorrect Classification of Impacts to Special Status Plants and Wildlife***

CEQA Guidelines §15065 requires that a lead agency must make a mandatory finding of significance when a project would "reduce the numbers or restrict the range" of a rare, threatened or endangered species. If a lead agency makes a Mandatory Finding of Significance, it can only adopt CEQA findings to approve a project if it determines that feasible alternatives and mitigation measures have been adopted to avoid the impact if feasible or, if it is unavoidable, to lessen it to the maximum extent feasible. The Revised DEIR acknowledges that "the loss of individual or known habitats of rare, threatened, or endangered plant species would be considered significant." However, despite not having a complete environmental baseline with regards to rare species and deferring identification of impacts to rare species, the Revised DEIR concludes there would not be significant unavoidable impacts. The Revised DEIR must be revised to include a complete baseline and impact analysis.

The Revised DEIR discussion fails to identify California Newt (*Taricha tarosa*) as a CDFG California Species of Concern and lists it instead with common species. (Revised DEIR at p. 4.8-33.) Table 4.8-9b correctly identifies the species as a special status species. The Revised DEIR also fails to consider the impacts to this sensitive species as required by the Significance Criteria.

G207-231

### **G207-231**

The Applicant has completed surveys of the pipeline rights-of-way in accordance with California Department of Fish and Game protocol. Section 4.8 contains the results of these surveys. Where surveys were not completed, Section 4.8.4 of the EIS/EIR assumes the presence of any potentially affected species, evaluates potential impacts, and identifies mitigation measures. Additional preconstruction plant and wildlife surveys, specific to the final construction timeline and designated pipeline alignment, would be completed for special status species, federally listed species, or California protected species specified by the USFWS or the CDFG, to minimize the potential for causing mortality of local wildlife. However, for purposes of the impact analyses and resultant mitigation, all relevant species are presumed to exist in the vicinity of the proposed Project.

G207-232

Mitigation measures for each significant impact are stipulated throughout the EIS/EIR and those that require future products, e.g., the Biological Resource Mitigation Implementation and Monitoring Plan, contain a listing of topics that must be addressed. These requirements are performance standards by which such plans would be evaluated when it is practical to prepare them. Under the CEQA, mitigation measures "may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specific way." (State CEQA Guidelines section 15126.4(b)). NEPA does not require performance measures for proposed mitigation but only requires mitigation measures to be identified (40 CFR 1502.14(f) and 1502.16(h)). The various Federal and State permits (e.g., CWA, Section 404, Streambed Alteration Agreement) required for the Project may contain additional conditions as a component of that permit. In such cases the issuing agency would be responsible for ensuring compliance. Permits may not be granted until the NEPA and CEQA processes have been completed and the lead agencies have acted on the Project, in part because agencies rely on the analysis included in the EIS/EIR.

### **G207-232**

The comment misinterprets the meaning and function of section 15065 within Article 5 (Preliminary Review of Projects and Conduct of Initial Study), State CEQA Guidelines. As indicated in section 15065, an EIR is required if any of the specified criteria is met. Contrary to the comment, section 15091 of the State CEQA Guidelines specifies the Findings that must be made for any potential significant impact identified in an EIR should the lead agency approve a project.

The Applicant has completed surveys in accordance with California Department of Fish and Game protocol. Where surveys were not completed, the EIS/EIR assumes the presence of any potentially affected species, evaluates potential impacts, and provides appropriate mitigation to avoid or sufficiently reduce potential impacts and mitigation accordingly.

The suggested change regarding the California newt has been made.

The impact on the unarmored threespined stickleback is not considered significant because a drilling fluid leak into the riverbed is not likely, and other construction-related fluids that might seep into the river bed would be captured, as stated in Section 4.8.4.

As stated in Section 4.8, potential burrowing owl habitat was found during burrowing owl surveys, but no owls or evidence of owls were found.

Table 4.8-6 presents an analysis of trees along the proposed Center Road Pipeline, including an assessment of nesting activity. Species of concern evaluated were identified through consultation with the California Department of Fish and Game.

Similarly, the Revised DEIR finds that other rare species and their habitats will be adversely impacted but, contrary to the Significance Criteria, it finds these adverse impacts to rare species to be less than significant. For instance, Impact TerrBio-1 includes adverse impacts to the Federal endangered and State fully protected Unarmored Threespine Stickleback, but the impact is found to be mitigable. Considering the stated possibility of a drilling fluid leak into the habitat of this species, this rare species would be adversely affected and the impact should be listed as significant.

The Revised DEIR notes the presence of burrowing owls, a State Species of Concern. It finds that project activities could crush, smother, hit, or bury wildlife in their nests/burrows. (Revised DEIR at p. 4.8-62.) Impacts to rare species such as burrowing owls (Impact TerrBio-5 "Direct Permanent Impacts on Wildlife Mortality") must be identified as significant consistent with the Significance Criteria and CEQA Guidelines Section 15065. California law expressly prohibits destruction of occupied nests, and provides no permitting mechanism for such destruction.

Table 4.8-9b lists several federal and state animal species of concern that have been documented or have the potential to occur within the project area. Despite the Significance Criteria requirement to treat adverse impacts to rare species as significant impacts and CEQA Guidelines §15065's mandate to consider reductions in the range or numbers of a rare species to be significant impacts, the Revised DEIR completely fails to evaluate impacts to many rare animal species listed in this table as known or expected to occur within the project area. In addition, the DEIR's five impacts to terrestrial biological resources do not include indirect impacts to rare animal species such as loss of wildlife habitat or nest sites during ROW clearing, arguably the project activity with the greatest potential to harm rare wildlife and its habitat.

***Taking Federal or State-listed Species must be classified as Significant Impact***

The reference to taking listed species in AM TerrBio-2a implies the project will reduce the numbers and restrict the range of rare species mandating a significant impact finding pursuant to CEQA Guidelines §15065 and the Significance Criterion referenced above. This measure indicates that take of rare plant species is likely through horizontal directional boring (HDB) leaks, and pipeline construction, operation and maintenance. Maintenance (e.g., of the ROWs and/or pipelines) may result in a long term decrease in the range and numbers of individuals of rare species. In addition, the Revised DEIR fails to note that "take" of Unarmored Threespine Stickleback would violate State law, which "fully protects" this species.

No measures contained in the Revised DEIR require protection, propagation or planting of rare species to be impacted by the project. MM TerrBio-2b defers development of a mitigation plan for rare plant species, and fails to include standards for avoidance or replacement, or for ascertaining success of the mitigation. Therefore, this impact is not mitigated to below significance by any measure and should be classified as significant (Class I).

G207-232 Continued

G207-232  
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The impacts identified reflect the results of consultation with appropriate State and Federal agencies. See Appendix I. As discussed in Section 4.8.4, reductions in the range or numbers of rare species, or "take" of the Unarmored Threespine Stickleback, is not anticipated with implementation of the identified mitigation. Appendix M contains the Water Quality Construction Best Management Practices that would further reduce the chances of erosion affecting sensitive species and habitats; therefore, the potential impact is appropriately designated as Class II (NEPA major or moderate adverse, short- or long-term).

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***Impact TerrBio-1: Temporary Increase in Sedimentation***

The Revised DEIR notes that the Unarmored Threespine Stickleback is highly susceptible to sedimentation in the water. “Any amount of turbidity may interfere with development.” (Revised DEIR at p. 4.8-51.) The Revised DEIR discusses the impact of sedimentation from the pipelines’ waterway crossings such as at Santa Clara River and San Francisquito Creek, but does not address the potentially significant impact of sedimentation from the cleared ROWs and areas of trenching.<sup>254</sup> Figure 4.8-6 illustrates that the Line 225 project area is hilly and erosive. Landslides and eroding slopes are visible in this figure. An 80-foot wide cleared ROW going up and down hills against the contours of the slopes will result in potentially significant erosion and sedimentation during the rainy seasons following the project construction, and potentially for the long-term if complete ROW revegetation (which as noted above is not required) is not successful. The Revised DEIR’s discussion of Impact TerrBio-1 almost entirely overlooks this potentially significant impact related to sedimentation from the cleared ROWs and the Unarmored Three-spine Stickleback. Only vague references to undefined best management practices (BMPs) on page 4.8-50 and in AM TerrBio-1a could theoretically address sedimentation from the cleared ROWs. However, the referenced BMPs are not described and the mitigation measure merely defers formulation of an effective erosion control measure by claiming, “BMPs would be incorporated into the construction activities.” This provides no assurances such BMPs will be effective or implemented in a timely manner and therefore cannot be relied upon to mitigate this impact to less than significant.

***Impact TerrBio-3: Temporary or Permanent Changes to Wetlands or Waters of the U.S. during Construction***

The Revised DEIR states that “Backfill material and methods could affect wetland hydrology by altering surface and subsurface flow.” (Revised DEIR at p. 4.8-60.) It finds that impacts from trenching and backfilling through wetlands would be “considered potentially significant.” (Id.) Specifically, the Revised DEIR finds in part that backfilling with coarse sediments may facilitate accelerated draining of wetlands. The Revised DEIR then relies on vague and unenforceable mitigation measures to address this impact, and defers identification of wetland areas to be avoided.

***Biological Effects of Global Warming***

The Revised DEIR fails to analyze this project’s direct and indirect contribution to significant greenhouse gas emissions and resultant global warming. Changing average ambient air temperatures, weather patterns, rainfall patterns, water temperatures, coastal

<sup>254</sup>/ The 80-foot wide ROW over the 22.4 mile proposed pipelines’ lengths equals 217 acres of ROW to be cleared. Such a large area of clearing has the potential to generate substantial quantities of sediment. The “Potential Impact Area” of 1,000 feet on either side of the pipelines results in a total Potential Area of Impact of an amazing 5,429 acres.

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Section 4.8.4 discusses various ways in which known habitat for the unarmored threespine stickleback would be protected throughout construction. Although there are ways in which this habitat could possibly be affected, as discussed in Section 4.8.4, these are considered remote possibilities for the reasons stated.

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Section 4.8.4 discusses measures that would be taken to minimize impacts on wetlands (Impact TerrBio-3). In addition, the BMPs (see Appendix M) would further reduce impacts on sensitive species and habitats.

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Sections 4.6.1.4 and 4.6.2 contain information on Project emissions of greenhouse gases and recent California legislation regarding emissions of greenhouse gases.

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sea levels and erosion rates caused by global warming are significant cumulative impacts to which this project contributes. Moreover, they may combine with the other adverse effects of project construction, operation and maintenance to substantially diminish terrestrial biological resources during the life of this project. The Revised DEIR is deficient for excluding discussion of these significant impacts to which this project contributes.

#### 4.8.4 Mitigation Measures

As noted above, many mitigation measures set forth in the Revised DEIR are deferred, or are so vague as to be ineffective and unenforceable. Under CEQA, mitigation measures must be known, feasible, and effective.<sup>255</sup>

##### *Release or Spill of Drilling Muds or Petroleum Products*

If there is a release of petroleum products or toxic drilling muds into wetlands, streams or other waters, this will cause a potentially significant impact, but no specific mitigation measures in the Revised DEIR address or include standards for the cleanup of petroleum or drilling muds. Instead, the Revised DEIR requires development and implementation of a Drilling Fluid Release Monitoring Plan (DFRMP) which merely entails maintaining containment equipment, monitoring for leaks, stopping work when leaks are detected, reporting the spill or leak, and cleaning up the spill or leak. It does not include standards for clean up and defers identification of the mitigation actions to future development of the DFRMP.

References to a Spill Prevention, Control, and Counter Measures (SPCC) Plan and HDB/HDD Drilling Contingency Plans (Revised DEIR at p. 4.8-50) are also vague. These plans are poorly defined and merely defer development of the mitigation measures without standards to ensure the measures will be successful. Specifically, the HDB Contingency Plan, once prepared, would require the operator to contact CDFG and USFWS *after a spill* to develop measures to clean up the release site without impacting rare plant species. (Revised DEIR at p. 4.8-53.) While input from these agencies is important and site-specific considerations will apply to any spill, clean up measures which protect rare plants should be identified (in the Revised DEIR) to ensure the impact identified is fully mitigated.

Having an inadequate and incomplete baseline also prevents assurances that post-spill restoration activities will be sufficient to meet pre-spill conditions.

#### G207-236 Continued

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#### G207-237

For mitigation measures regarding spills of drilling fluids and petroleum products onshore, refer to MM WAT-3a in Section 4.18.4, and MM HAZ-2a and MM HAZ-2b in Section 4.12.4. Furthermore, the document specifies the content of and performance standards for the Drilling Fluid Release Monitoring Plan (see Appendix D1), as provided in section 15126.4(a)(1)(B), State CEQA Guidelines.

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<sup>255</sup> / Federation of Hillside and Canyon Assns v. City of Los Angeles, 83 Cal.App.4th 1252 (2000).

### ***Impacts to Upland Vegetation***

The Revised DEIR states that, “The applicant shall, to the extent feasible, avoid, minimize, and compensate for impacts on trees.” (Revised DEIR at p. 4.8-59.) However, the proposed mitigation measure (MM TerrBio-2g) does not specify which trees, or which areas of trees would be avoided. The Revised DEIR lumps avoidance with minimization and compensation rather than specifying which treed areas will be avoided and which will be compensated for. The measures designed to mitigate Impact TerrBio-2, including AM TerrBio-2b, improperly defer identification of trees and other upland vegetation to be removed, including coastal sage, riparian habitats and other areas recognized as “environmentally sensitive habitat areas” pursuant to the California Coastal Act,<sup>256</sup> and they fail to provide standards for determining which areas will be avoided and which areas will not.

Additionally, MM TerrBio-2g states that the type of tree to be planted would be approved by “the CDFG and/or the landowner.” “And/or” is not enforceable mitigation measure language. Since the landowner is in a sense a project partner, the lead agencies considering certification of the EIR and issuance of the permit(s) must determine which species are necessary to mitigate project impacts to trees and must also consider and avoid significant impacts of planting certain species (e.g., invasive exotic species near natural habitats). Therefore, to ensure it is feasible and enforceable and does not result in other adverse impacts, CDFG alone should have final say over which trees are planted and this measure should specifically prohibit planting of invasive exotic species.

Mitigation for impacts to oak trees is also inadequate. Although Tables 4.8-8a and 4.8-8b find that a certain number of Valley Oak and Live Oak trees are within the ROW, the Revised DEIR does not specify where trees will be removed. Given the environmental significance of oaks in this region and the rarity of Valley Oaks, removing mature oaks in the ROW should be avoided where it is feasible to work around them. Due to their importance and the time it takes to replace mature oaks, removals of mature oaks should constitute a significant unavoidable (Class I) impact. Instead of deferring identification of impacts to oaks, the Revised DEIR should identify which of the oaks identified in the ROW can be avoided and must propose feasible mitigation measures (e.g., temporary fencing) to protect oaks that can be avoided in the ROW.

### ***Impacts to Sensitive Resources that cannot be Avoided***

Measure AM TerrBio-2a requires that if “sensitive resources cannot be avoided, no work would be authorized until the appropriate resource agencies (CDFG and USFWS) determine the action would not result in significant biological impacts.” (Revised DEIR at p. 4.8-55.) This measure may be infeasible because it could stop the project. In addition, AM TerrBio-2a improperly defers identification of mitigation for impacts to

### **G207-238**

Terrestrial biological resources were evaluated within a pipeline corridor that would include both the construction and permanent rights-of-way. Even though the precise alignment of the pipeline within the corridor would not be determined by SoCalGas until final engineering design, the impacts of any potential pipeline alignments within the corridor have been evaluated.

The text regarding CDFG approval of tree species to be planted has been clarified.

Oak tree impacts and mitigation measures are discussed in Section 4.8.4.

### **G207-239**

First, the Applicant, in agreeing to this condition, bears the risk of the indicated circumstance and second, this mitigation is not deferred, but rather its application is made contingent on the potential occurrence of such circumstance.

Furthermore, biological monitors would have the authority to stop construction if previously undetected sensitive resources are found within the construction ROW until the time that the USFWS and CDFG have given guidance on how to proceed without resulting in significant impacts. This is similar to the stop work authority given to monitors for cultural resources (see AM CULT-3a).

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<sup>256</sup>/ Public Resources Code § 30107.5.

rare plants. Deferring mitigation plans for avoidance and compensation of impacts deprives the public and agencies of the opportunity for public review of the adequacy of the DEIR's mitigation measures and impact analyses, and is not permitted under CEQA.

#### ***Biological Resources Mitigation Implementation and Monitoring Plan***

The Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) would be developed after certification of the EIR and would be based on surveys conducted after EIR certification. Measure AM TerrBio-2b requires this plan to include all mitigation measures for the project's effects on special status species and habitats, but does not itself include these mitigation measures or standards for success of the measures. In fact, it even explicitly defers identification of the standards for what constitutes successful mitigation by requiring only that such success criteria for mitigation measures be in the post-EIR certification BRMIMP. This deferral of the formulation of feasible and effective mitigation measures and standards for success removes the public from being in a position of informed participation in the public environmental review process and limits the public's ability to comment on the feasibility and effectiveness of proposed mitigation measures to lessen impacts to public environmental resources. Feasible mitigation measures or, at a minimum, standards for successful mitigation must be in an EIR to comply with CEQA Guidelines §15126.4.

#### ***Identification of Habitat Buffer Sizes and Management is Deferred***

The Revised DEIR (at p. 4.8-59) expressly defers, without performance standards, the identification of the buffer size to be established around habitats to be protected. AM TerrBio-2a also defers identification of buffer area size to protect species and habitats, requiring merely that "appropriate buffer distances would be determined" by a biological monitor. (Revised DEIR at p. 4.8-54.) The buffer size and the restrictions within buffer areas are central to the mitigation measure's effectiveness. Adequately sized and managed buffers are needed to protect resources from significant impacts. In order to comply with CEQA by disclosing rather than deferring feasible, enforceable and effective mitigation measures, the Revised DEIR must state the minimum size of buffers "consistent with established resource agency guidelines" and describe why from a biological standpoint, their size and management will ensure impacts are mitigated to the maximum extent feasible. Otherwise, the feasibility and effectiveness of such buffers to mitigate significant impacts cannot be evaluated by the public or guaranteed by the lead agencies.

#### ***Weed Management***

The ROWs will act as corridors for invasion of non-native plants into natural areas, creeks and wetlands. These plants cause a host of serious problems listed in the Revised DEIR. The Revised DEIR recommends salvaging the topsoil for redistribution as part of the measure to reduce the impact of non-native weeds; however, this measure can have the adverse effect of spreading non-native seeds around. This measure should be

#### **G207-239 Continued**

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#### **G207-240**

The Applicant has completed surveys of the pipeline rights-of-way in accordance with California Department of Fish and Game protocol. Section 4.8 contains the results of these surveys. Where surveys were not completed, Section 4.8.4 of the EIS/EIR assumes the presence of any potentially affected species, evaluates potential impacts, and identifies mitigation measures. Additional preconstruction plant and wildlife surveys, specific to the final construction timeline and designated pipeline alignment, would be completed for special status species, federally listed species, or California protected species specified by the USFWS or the CDFG, to minimize the potential for causing mortality of local wildlife. However, for purposes of the impact analyses and resultant mitigation, all relevant species are presumed to exist in the vicinity of the proposed Project.

G207-241

Mitigation measures for each significant impact are stipulated throughout the EIS/EIR and those that require future products, e.g., the Biological Resource Mitigation Implementation and Monitoring Plan, contain a listing of topics that must be addressed. These requirements are performance standards by which such plans would be evaluated when it is practical to prepare them. Under the CEQA, mitigation measures "may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specific way." (State CEQA Guidelines section 15126.4(b)). NEPA does not require performance measures for proposed mitigation but only requires mitigation measures to be identified (40 CFR 1502.14(f) and 1502.16(h)). The various Federal and State permits (e.g., CWA, Section 404, Streambed Alteration Agreement) required for the Project may contain additional conditions as a component of that permit. In such cases the issuing agency would be responsible for ensuring compliance. Permits may not be granted until the NEPA and CEQA processes have been completed and the lead agencies have acted on the Project, in part because agencies rely on the analysis included in the EIS/EIR.

G207-242

#### **G207-241**

First, we are unable to find any reference to the identification of buffers on the page cited.

Second, TerrBio-2a specifically states that, "Flagging, mapping, and fencing would be used to protect any special status plants within 200 feet (61 m) of the ROW." Also, as stipulated, required

buffers would be determined by a biological monitor who would be cognizant of established resource agency guidelines and could, as stipulated, involve both the CDFG and the USFWS.

**G207-242**

Any additions to the measures outlined in AM TerrBio-4a for weed management would be made in consultation with Federal, State and local agencies. As discussed in Section 4.13.3, approximately 90 percent of the lands adjoining the proposed Center Road Pipeline route are in agricultural use; in residential and business areas, the ROW would be located in existing streets or other ROW in accordance with the franchise agreement.

modified to prohibit salvage of topsoil in weedy areas, and to limit salvage to areas where there's a natural seed bank.

In addition, Measure AM TerrBio-4a should be modified to require the following:

- The noxious weed survey should be undertaken on foot by qualified botanists during the appropriate times of the year to identify such weeds;
- Removal of invasive species from work areas prior to when they seed, and careful and proper disposal of such noxious plant materials to prevent spread;
- Cleaning of equipment before entering the project area from offsite;
- Avoidance of the salvage of weed seed-infested topsoil; and
- Use of natives from local native seed stocks to revegetate disturbed soils.

### ***Stream Crossing Methods are Deferred***

The Revised DEIR improperly defers identification and mitigation of impacts resulting from water crossings. Measures MM TerrBio-2f and MM TerrBio-3a require preparation of mitigation plans at a future time but do not themselves constitute feasible and effective mitigation measures to reduce significant impacts to less than significant. They similarly fail to set forth criteria for success of the mitigation measures requiring only that these be developed later, subsequent to the public EIR process. The Revised DEIR must disclose which habitat areas will be affected by trenching and by HDD or HDB, and which areas will be avoided. The Revised DEIR must explain the mitigation measures that will be employed and provide assurances (i.e., success criteria, timing of mitigation) that significant impacts will be mitigated as the DEIR concludes.

### ***Pre-Construction Surveys***

In a similar fashion, AM TerrBio-2a ("Pre-Construction Surveys") and AM TerrBio-2b (BRMIMP) defer the determination of whether a sensitive species or resource can be avoided because not enough is known about the environmental baseline to make this determination in the Revised DEIR. The Revised DEIR needs to present information that can illustrate whether sensitive resources can be avoided. The lack of this information in the DEIR precludes full and effective review of the proposed action's impacts.

### ***Erosion Control***

Measure AM TerrBio-1a refers to "restoration activities," presumably along the ROW, but provides no details or performance standards. (Revised DEIR at p. 4.8-52.) Such vague promises of mitigation do not provide assurances that such mitigation will be feasible or effective as required under CEQA, and must be described with some level of detail. The ROWs should be revegetated with local native plant species grown from natural populations of local native plants occurring at or near the project site in order to help minimize potentially significant erosion of these often steep ROWs through soil formation subject to high erosion. Using local natives helps replace what was there,

## **G207-242 Continued**

G207-242  
Continued

### **G207-243**

Tables 4.18-5 and 4.18-6 in Section 4.18 (Water Quality) describe crossing methods for each waterbody on the proposed Center Road Pipeline and the Line 225 Pipeline Loop.

To the contrary, MM TerrBio-2f specifies how the Applicant "shall avoid, minimize, and compensate for impacts on riparian habitat during construction due to trenching or open cut crossings of waters of the United States." MM TerrBio-3a also states "Impacts on wetlands or waters of the United States that provide habitat for special status plant species shall be avoided, minimized, or reduced."

G207-243

### **G207-244**

The Applicant has completed surveys in accordance with California Department of Fish and Game protocol. Where surveys were not completed, the EIS/EIR assumes the presence of any potentially affected species, evaluates potential impacts, and provides appropriate mitigation to avoid or sufficiently reduce potential impacts, and mitigation accordingly.

### **G207-245**

Terrestrial biological resources were evaluated within a pipeline corridor that would include both the construction and permanent rights-of-way. Even though the precise alignment of the pipeline within the corridor would not be determined by SoCalGas until final engineering design, the impacts of any potential pipeline alignments within the corridor have been evaluated.

G207-244

Further, the intent of AM TerrBio-1a is to control erosion during pipeline construction. Restoration requirements are specified elsewhere, e.g., in MM TerrBio-2f.

G207-245

ensures success, and avoids the biological impact of introducing non-native species or variants of natives which can result in hybridization and dilution of the local native plant populations' gene pools. Such restoration would help mitigate runoff of sediment into streams and rivers, and thus protect the Unarmored Three-spine Stickleback the Revised DEIR finds is highly susceptible to sedimentation in its river and creek habitats. Such restoration would also mitigate terrestrial biological resource impacts associated with clearing the 217 acre ROW areas. However, the referenced "restoration activities" lack any detail needed to assure they will be feasible and effective at warding off the potentially significant erosion and sedimentation impact and the indirect effect of sedimentation on this endangered species (and other special status species impacted by sedimentation) occurring in some waterways below the ROWs.

In addition, the standards provided in AM TerrBio-1a are too general to ensure that significant sedimentation impacts would be mitigated. Additional mitigation or avoidance is feasible through measures that avoid trenching through wetlands, waterways, and aquatic habitats, and limiting trenching and HDD to the dry season. These measures should be included in the Revised EIR to provide some assurance the impacts of sedimentation on wetlands will be avoided or mitigated consistent with CEQA.

Measure AM TerrBio-2a fails to require installation of silt fencing around highly sensitive areas or under certain conditions where special status plant species could be impacted by sedimentation and instead only states that the biological monitor would have the *authority* to require installation of such fences. This does not provide any assurances that silt fences will be installed or indicate where they would be installed. This is likely because the Revised DEIR's Environmental Setting is incomplete and the lead agencies do not know where all the potentially threatened biological resources are. Therefore, the Revised DEIR must be revised again to describe the existing environmental baseline setting and to describe and require installation of silt fencing where needed to protect resources. Waiting until after the EIR is certified and the project is approved and being constructed to determine where and if certain mitigation measures would be employed violates CEQA's requirements that EIRs contain feasible and effective mitigation measures to ensure significant impacts are avoided and that unavoidable impacts are mitigated to the maximum extent feasible.

#### ***Confinement of Activity to Right-of-Way***

Measure AM TerrBio-2e protects resources outside of the ROWs. Additional biological resources exist within the planned ROWs (e.g., oak trees, areas of significant native vegetation, special status plant species, etc). This measure would be more effective at mitigating impact TerrBio-2 if it also required protection of sensitive resources inside the ROW where feasible. Additional feasible mitigation or avoidance of sensitive resources within the ROW is feasible. In fact, the MM TerrBio-3a includes a general provision limiting the width of ROWs through wetlands and waters. This illustrates that avoidance of some biological resources within the planned 80-foot wide ROW is feasible. Given

#### **G207-245 Continued**

G207-245  
 Continued

#### **G207-246**

Mitigation measures under Impact TerrBio-2 in Section 4.8.4 discuss protection of sensitive resources both within and adjacent to the construction ROW.

G207-246

the width of the ROW, AM TerrBio-2a, 2b and 2c can feasibly be modified to require identification, flagging, fencing and subsequent preservation of areas of high biological significance in the ROWs. This would ensure significant impacts to biological resources such as special status plants, oak trees and significant native habitats (Impact TerrBio-2), are mitigated to the maximum extent feasible, and would also help reduce erosion / sedimentation threatening the Unarmored Three-spine Stickleback as described in Impact TerrBio-1.

#### ***Failure to Evaluate Environmental Impacts of Mitigation Measures***

AM TerrBio-4a would include preserving and redistributing topsoil with its seed bank for the purpose of minimizing biological impacts of noxious weeds (Impact TerrBio-4). If not modified, this measure would result in an increase to the potentially significant Impact TerrBio-4 and cause significant impacts to native plant communities if implemented in areas containing invasive non-native plant species. If implemented in such an area, preservation and redistribution of the topsoil would foster dispersal of such plants. To mitigate the impact of this mitigation measure, the measure should only be implemented where there is a native seed bank (as determined by comprehensive botanical surveys), and only in areas where trenching cannot be avoided.

#### ***Inadequacy of Wetland Impact Mitigation***

Measure MM TerrBio-3a is inadequate for avoiding or mitigating the proposed action's wetland impacts, and is likely incapable of satisfying future regulatory requirements of the USACE, CCC, and CDFG. The proposed mitigation for the project's wetlands impacts must be thoroughly revised by inclusion of full baseline and impact analysis, and through a clear mitigation prioritization system. The Revised DEIR first must identify all wetlands as noted above. To ensure impacts are mitigated to the maximum extent feasible, the document should specify which wetlands are to be avoided and which cannot be avoided. The project should avoid all wetlands to the maximum extent feasible to ensure significant impacts are avoided or minimized. HDB or HDD should be preferred to trenching, but HDB and HDD should be routed to avoid potential impacts to wetlands as well. If coastal zone wetlands are not to be avoided, the project must be reviewed to ensure consistency with the Coastal Act's strict policies protecting wetlands.

#### ***Failure to Consider Avoidance Measures for Sensitive Species and Habitats***

The Revised DEIR does not propose any mitigation measures that would route the pipeline to avoid the significant impacts of both HDD / HDB and trenching in wetlands, sensitive species habitats, habitats protected by local, State or Federal policies, and other water bodies or streams. Under CEQA, the preferred mitigation for significant impacts is to avoid such impacts when feasible. The Revised DEIR does not evaluate any alternatives that would avoid the need for trenching or HDD / HDB within or under wetlands, and that would thus avoid potential impacts of drill mud release into wetlands.

#### **G207-246 Continued**

G207-246  
Continued

#### **G207-247**

Any additions to the measures outlined in AM TerrBio-4a for weed management would be made in consultation with Federal, State and local agencies. As discussed in Section 4.13.3, approximately 90 percent of the lands adjoining the proposed Center Road Pipeline route are in agricultural use; in residential and business areas, the ROW would be located in existing streets or other ROW in accordance with the franchise agreement.

G207-247

#### **G207-248**

First, with respect to the identification of wetlands, the Applicant has completed wetland delineations (using Army Corps of Engineers definitions and California Coastal Commission and California Department of Fish and Game wetland definitions where appropriate) for the proposed pipeline routes. Section 4.8.1 presents a discussion of baseline wetland conditions from these wetland delineations.

G207-248

See also Tables 4.8-2a and 4.8-2b in Section 4.8.1. TerrBio-3a requires the identification and marking of wetland areas to be avoided during construction and operation activities. See the response to the comment below.

#### **G207-249**

Most of the wetlands that would be crossed using trenching are agricultural ditches. In many places along the proposed pipeline routes where more valuable wetland resources exist, i.e., shore crossing and riparian zones, techniques such HDB and use of existing pipe bridges have been incorporated into the Project design, and Section 4.8 has been updated to reflect this. In addition, MM TerrBio-3a, which limits the width of ROWs through wetlands and waters, illustrates the avoidance of some sensitive biological resources.

G207-249

Similarly, several wetland or stream crossings would be made by trenching (Revised DEIR at p. 4.8-60), but the Revised DEIR fails to consider alternatives that would avoid trenching through these waters, and avoid the potentially significant impact associated with trenching through creeks and wetlands. Rerouting the pipeline to avoid such areas is the most effective way to avoid or minimize this impact.

***Failure to Restrict Activities to Periods when Sensitive Shorebirds are Not Nesting***

The timing of construction would avoid the nesting season for the western snowy plover for the Alternative DWP, but similar restrictions are not proposed for the proposed project. The Revised DEIR should specify measures to avoid shorebird nesting season during project construction to avoid the potential impacts to nesting shorebirds discussed on page 4.8-67.

***Failure to Evaluate Impacts of Stream Bank Stabilization***

The Revised DEIR states that creek banks impacted by crossings would be stabilized but fails to specify the techniques that will be used to stabilize affected stream banks. (Revised DEIR at p. 4.8-60) If bank stabilization referred to in the Revised DEIR would entail the use of riprap or other hard bank stabilization methods (e.g., gabions, retaining walls), the Revised DEIR should disclose these techniques, and find that the proposed action will result in a significant permanent impact because such methods can increase downstream bank erosion by deflecting flows. In addition, they prevent re-growth of riparian vegetation. Therefore, to the extent feasible, stream bank stabilization should be avoided. All unavoidable bank stabilization should incorporate bio-technical methods as opposed to rip rap and bank armoring and utilize native plant materials to mitigate biological impacts to the maximum extent feasible.

***Seasonal Avoidance of Trenching and HDD / HDB***

For those wetlands, streams, habitats and other waters that cannot be avoided, restricting trenching to the dry season is a feasible and effective mitigation measure to reduce erosion and sedimentation. The Los Angeles Regional Water Quality Control Board recommends timing grading to avoid the rainy season to reduce erosion and sedimentation. This measure is feasible and effective. The Revised DEIR must be revised to consider avoidance of HDD under habitats and trenching through habitats when feasible, and timing trenching to avoid the rainy season when complete avoidance is not feasible.

**4.8.5 Alternatives**

Due to the lack of specificity regarding both the Center Road Pipeline and the Line 225 Pipeline routes and regarding impacts on sensitive biological resources, the Revised DEIR fails to provide sufficient information to allow comparison of the various

**G207-249 Continued**

G207-249  
Continued

**G207-250**

Section 4.8.3 of the March 2006 Revised Draft EIR states that construction activities of the proposed Project would avoid the western snowy plover nesting season. Nesting times to be avoided during construction for all bird species of concern have been updated in Section 4.8.

G207-250

**G207-251**

The text referred to also indicates that bank stabilization would only occur as necessary and would be accompanied by revegetation. Note that MM TerrBio-2f, Riparian Avoidance and Restoration, would also apply for Impact TerrBio-3.

G207-251

**G207-252**

Section 2.7.2 discusses this topic.

**G207-253**

See also the response (G207-220) to the comment in the middle of page 90 of this letter. Terrestrial biological resources were evaluated within a pipeline corridor that would include both the construction and permanent rights-of-way. Even though the precise alignment of the pipeline within the corridor would not be determined by SoCalGas until final engineering design, the impacts of any potential pipeline alignments within the corridor have been evaluated for the proposed Project and compared with alternative routes referred to in the comment.

G207-252

Last, conclusions about whether the Line 225 Alternative avoids or substantially lessens significant terrestrial biology impacts could not be made until the analysis was completed.

G207-253

alternatives. This failure represents a fundamental flaw under CEQA that must be corrected in a new revised DEIR.

#### 4.8.5.2 Alternative DWP – Santa Barbara Channel / Mandalay Shore Crossing / Gonzales Road Pipeline

This alternative notably avoids half of the 12 water features identified for the project; however the DEIR fails to make a finding regarding whether this is a substantial reduction in the severity of impacts to wetlands. On the other hand, this alternative would increase impacts to some rare species including red sand-verbena. This alternative should only be considered if it avoids or substantially lessens a significant impact of the proposed shore crossing and pipeline route.

#### 4.8.5.3 Alternative Onshore Pipeline Routes

Center Road Pipeline Alternative 1 would decrease impacts to the number of water features impacted compared to the project from 12 to 9, and may substantially reduce impacts to wetlands and wildlife. The Revised DEIR should explain whether this alternative substantially lessens or avoids any significant impacts as required under CEQA. Center Road Pipeline Alternative 2 impacts 11 water features and generally has similar impacts to the project. Center Road Pipeline Alternative 3 impacts only 8 water features and may substantially reduce project impacts to wetlands and wildlife as a result, but the Revised DEIR fails to make this comparison.

#### *Line 225 Alternative 1*

The purpose and need for the Santa Clarita Valley pipeline are not clearly specified in the Revised DEIR, so it is not apparent why this pipeline is required as a component of the proposed action, or why only two alignments are considered in the DEIR. The Revised DEIR must evaluate a full range of alternatives alignments that avoid or minimize impacts associated with crossing the Santa Clara River and San Francisquito Creek. This alternative appears to cross right through a critical habitat for the Unarmored Three-Spine Stickleback. (Revised DEIR at p. 4.8-71.) It would be installed using HDD technology and would not be placed within a bridge as proposed for the project. This could result in significant impacts to the Unarmored Three-Spine Stickleback in the event of a spill or leak that would likely be avoided by the project's likely reliance on existing bridges to cross the Santa Clara River and San Francisquito Creek. The Revised DEIR must explain how this project alternative complies with CEQA by avoiding or substantially lessening significant impacts.

#### ***Consistency with State, Regional, and Local Plans and Policies***

The discussion of the proposed action's consistency with applicable state, regional, and local plans and policies in the Revised DEIR Land Use and Terrestrial Biological Resources sections is wholly inadequate. Applicable plans and policies regarding

#### G207-253 Continued

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#### G207-254

We disagree with this conclusion because the consistency of the proposed Project with local plans and policies regarding biological resources was analyzed. Table 4.8-10 identifies those plans and policies relevant to the proposed action.

The Project would not conflict with provisions of an ongoing wetland restoration project, adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan or biological resource preservation policy. The Project would not impact any ongoing restoration project or conservation plan.

Habitat impacts associated with Ormond Beach would be avoided by using HDB technology to install the pipeline across the beach, and all construction activities would be confined to the Reliant Energy Ormond Beach Generating Station. The Line 225 Pipelines route would be installed within the existing bridge girder system while controlling for any potential impacts (e.g., introduction of construction debris to creek), thereby eliminating any impacts on the habitat along the Santa Clara River and San Francisquito Creek. In addition, the Applicant would avoid disturbing nesting birds such as the western snowy plover by construction outside the nesting season.

As stated in Section 4.8.1.1, wetlands within the ROW along the coastline were delineated to meet the CCC and CDFG wetland definitions, and the section further describes the Applicant's responsibility to comply with the California Coastal Management Act, and CCC.

The pipeline would be installed beneath the wetlands within Ormond Beach using an HDB method, thereby avoiding surface disturbance to these wetlands.

Project impacts on special status species and their habitats within the coastal zone would be avoided by installing the pipeline beneath Ormond Beach using an HDB method. No water quality impacts are expected to occur on wetlands or water features within Ormond Beach because of the HDB technology.

G207-254

biological resources, including sensitive species and wetlands, must be considered in the analysis of the proposed action's impacts on terrestrial biological resources. The DEIR does not analyze the project's consistency with specific local jurisdictions' general plan and local coastal program policies for the protection of biological resources, including the County of Ventura (which has specific wetland avoidance and buffer policies, for example), the City of Oxnard (which has strict resource protection policies for coastal areas), the City of Camarillo, and the City of Santa Clarita. According to the Revised DEIR's Significance Criteria, inconsistencies trigger a finding of significant land use impact and biological impact. (Revised DEIR at pp. 4.8-37 and 4.13-30.) Instead of assessing the project's compliance with each relevant local policy to determine whether inconsistencies exist, the Revised DEIR merely boils down very broad goal statements from each agency's general plan or local coastal plan and makes broad conclusory statements about consistency without ever evaluating the project against the specific provisions of these plans. The Revised DEIR must consider each relevant provision of general plans, local coastal programs, and other policies within affected jurisdictions to thoroughly and accurately analyze land use impacts.

The Revised DEIR does not list or discuss relevant sections of the California Coastal Act or analyze the proposed action's consistency with the Coastal Act, which regulates all uses in a wide range of wetlands (areas that meet at least one of three parameters discussed above) and other Environmentally Sensitive Habitat Areas.<sup>257</sup>

Statements in the Revised DEIR regarding the need for a Coastal Consistency Determination (p. 4.13-29) suggest that this is the Coastal Commission's only role in the project. However, the Coastal Commission will also issue Coastal Development Permits (CDPs) for projects within its original jurisdiction, and may consider appeals from permits issued by local agencies. The Revised DEIR should state clearly whether CDPs may be required for onshore pipeline installation, trenching, HDD / HDB, or maintenance. The Revised DEIR should discuss the requirements for CDPs for onshore pipeline installation.

The Revised DEIR refers (p. 4.8-13) to crossing and backfilling coastal zone wetlands. Filling in wetlands within the coastal zone is strictly governed by sections 30231, 30233 and 30240 of the Coastal Act, which generally prohibit fill in wetlands except for limited activities. To assure compliance, wetlands subject to the Coastal Commission's jurisdiction must be identified and avoided – including avoiding HDD beneath such habitats where feasible.

Similarly, the DEIR finds that adverse impacts would occur to special status species and habitats in the coastal zone and that the project will degrade water quality. The Revised DEIR should evaluate these impacts for consistency with the Coastal Act's requirements for ESHA preservation (Public Resources Code §30240) and water quality maintenance (PRC §30231).

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<sup>257</sup>/ California Public Resources Code §§ 30233, 30107.5 and 30240.

Where such conflicts with local, state or federal (biological resource protection) policies, laws or regulations occur, the Revised DEIR should identify a significant land use impact (and biological resources impact) and evaluate feasible ways to avoid and lessen such impacts associated with the project's conflicts with policies, laws and regulations.

#### *Consultation with U.S. Fish and Wildlife Service and NOAA Fisheries*

The Revised DEIR states that consultations with the USFWS and NOAA Fisheries are "in progress." (Revised DEIR, section 4.8.2, at p. 4.8-42.) Such consultations are required by the federal Endangered Species Act (ESA), which mandates that federal actions do not "jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species."<sup>258</sup>

From the information provided in Appendix I of the Revised DEIR, it appears that the ESA consultation has barely progressed beyond initial steps. Species lists have been exchanged, but the most recent identified correspondence from the USFWS (Dec. 2005) indicates that the USCG has yet to prepare a biological assessment in accordance with ESA regulations. The purpose of the biological assessment is to identify whether the proposed project "may affect" federally listed species. As explained by USFWS, the "may affect" determination is *not* equivalent to a determination under CEQA or NEPA that the project would not have significant adverse affects. (Revised DEIR, App. I, Dec. 20, 2005 Letter from USFWS to USCG.) In addition, depending on the outcome of the biological assessment, additional consultation may be required, including, potentially, the preparation of a "biological opinion," which would formally evaluate whether the project is likely to jeopardize a federally listed species or impact its critical habitat.

The biological assessment and any subsequent analysis carried out pursuant to the ESA are significant steps in evaluating project impacts to listed species. As such, it is quite possible that, as these steps in the consultation process are completed, additional new information regarding the Cabrillo Port project's impacts to species will be identified. Such information would also be relevant to evaluating terrestrial biological resource impacts under CEQA and NEPA.

#### **4.10 ENERGY AND MINERALS**

The Revised DEIR references the California Energy Action Plan and lists the major components of the Plan, but fails to acknowledge the "loading order" referenced above. Because LNG is on the list, the Revised DEIR proclaims that the proposed project is "compatible" with California's Energy Action Plan. (Revised DEIR at p. 4.10-7.) However, the Plan actually requires the state to pursue energy efficiency first, then renewable supplies, and modifications to distribution and transmission systems before considering LNG and other fossil fuels. Because energy efficiency and renewable

G207-254 Continued

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#### G207-255

Sections 4.7 and 4.8 and Appendix I have been updated to reflect the status of consultations with the USFWS and NOAA Fisheries.

#### G207-256

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As stated in Section 1.2.3, "[t]he California Legislature recognizes that the CEC is the State's principal energy policy and planning organization and the CEC is responsible for determining the energy needs of California." The EIS/EIR acknowledges the contribution of energy conservation and renewables to meet California's energy needs in Sections 3.3.1, 3.3.2, and 4.10.1.3. However, the 2005 California Energy Action Plan states explicitly that "California must also promote infrastructure enhancements, such as additional pipeline and storage capacity, and diversify supply sources to include liquefied natural gas (LNG)."

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<sup>258</sup> 16 U.S.C. § 1536(a).

sources are adequate to meet the state's energy needs, adding LNG to the mix is not compatible with the priorities set forth in the Plan.

The Revised DEIR repeats its earlier assertions, in section 3.0 above, by claiming that energy conservation measures and renewable energy sources will only partially offset the need for new power generation, and that LNG is still necessary to meet the State's energy needs. As noted in detail above, increases in energy conservation and renewable supplies can provide more energy than will be provided by the proposed LNG project.

Many experts note that importing LNG to California will interfere with our State's ability to reach its renewable energy goals. In 1993, Greenpeace noted that trade in natural gas will not facilitate a transition to clean, renewable energy, but rather "keep the North American energy market heavily biased towards fossil fuels."<sup>259</sup> A more recent Greenpeace report, titled "Liquid Natural Gas: A roadblock to a clean energy future," concludes that

The fast tracking of LNG within the California government threatens the tremendous strides that the renewable industry had made in the State. Efforts are underway within the State of California to promote LNG over energy efficiency and renewable energy resources in conflict with the official policy of the State articulated only two years ago in the Energy Action Plan.

There is no reason to fast-track LNG investments. California can meet its future energy demands without building any LNG terminals. If the State pursues aggressive energy efficiency goals, retrofits the old inefficient coastal power plants, and expands the States renewable energy goals, the State can reduce natural gas demand by one-third, the equivalent of three LNG terminals.<sup>260</sup>

As Greenpeace points out, the proposal to open global markets to natural gas will convert natural gas from a "transitional" fuel into a "permanent source of global warming gases."<sup>261</sup>

The current trend towards an increased dependence on Liquid Natural Gas (LNG) is frightening because it increases reliance on environmentally destructive fossil fuels and significantly delays the possibility of moving towards renewable energy sources by creating a costly infrastructure for LNG.<sup>262</sup>

If utilities commit to long-term contracts for LNG supplies, there will be less funding available to invest in renewables. In addition, long-term contracts for LNG will interfere with efforts to increase energy conservation, because conservation is in part a response to price. Energy conservation measures are basically reductions in demand, and demand

<sup>259</sup> / Greenpeace, *Natural Gas: Bridging Fuel or Roadblock to Clean Energy?* 1993.

<sup>260</sup> / Greenpeace, *Liquid Natural Gas: A roadblock to a clean energy future*, 2004.

<sup>261</sup> / Id.

<sup>262</sup> / Id.

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G207-258

### G207-257

Sections 1.2.2, 1.2.3, 1.2.4, 1.2.5 and 3.3 contain information on the adequacy of alternatives. Under NEPA and the CEQA, a reasonable range of alternatives must be considered to permit a reasoned choice of alternatives with respect to their environmental aspects.

Both NEPA and the CEQA require the consideration of alternatives to a proposed project. A lead agency's lack of jurisdiction over a potential alternative is one factor that it may consider in determining if a potential alternative is feasible, reasonable, and merits detailed study in an EIS/EIR. Whether a potential alternative is purely hypothetical or speculative, or whether the potential alternative can be accomplished in a successful manner in a reasonable period of time are additional factors the lead agency may consider in assessing the feasibility and reasonability of the potential alternative.

From a NEPA perspective, while a Federal agency must analyze "a range of reasonable alternatives" (as opposed to any and all possible alternatives), and may be required to analyze an alternative that is outside the capability of an applicant and that is outside the jurisdiction of the agency, the threshold question in determining whether to analyze any alternative is whether that alternative would be a "reasonable" alternative. Reasonable alternatives include those that are practical and feasible from the technical and economic standpoint and using common sense (CEQ 40 Questions; #2a).

To provide for an effective "hard look" at the alternatives the agency must limit the range to those alternatives that will best serve the environmental review process, and not needlessly examine and discuss in depth remote or speculative alternatives that that discussion does not facilitate a better decision making process. As stated in 40 CFR 1502.14(a), the EIS should "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."

Section 15126.6(a) of the State CEQA Guidelines states, in part, "[t]he Lead Agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives." The California Supreme Court in the Citizens of Goleta Valley case recognized that while an

agency's jurisdiction was only one factor to consider, "[t]he law does not require in-depth review of alternatives that cannot be realistically considered and successfully accomplished." In addition, the discussion in section 15364 in the State CEQA Guidelines states that "[t]he lack of legal powers of an agency to use in imposing an alternative or mitigation measure may be as great a limitation as any economic, environmental, social, or technological factor."

Chapter 3 discusses energy conservation, efficiency, and renewable sources of energy, and explains why these potential alternatives were not studied in detail in the EIS/EIR. The range of alternatives studied in detail is reasonable and conforms to NEPA and the CEQA requirements. Revisions to Chapter 3 clarify and elaborate on the "Alternatives Eliminated from Further Analysis" and "Alternatives Evaluated in Chapter 4."

As discussed in Sections 3.3.1 and 3.3.2, energy conservation and use of renewable energy sources do not meet the projected energy needs of California, as determined by the California Energy Commission in its 2005 Integrated Energy Policy Report Committee Final Report. The projected energy gap is to be filled by seeking additional supplies of natural gas, including LNG. The project goal of fulfilling California's and the nation's short- and mid-term natural gas supply needs or diversifying the supply of natural gas should be viewed in this context.

Section 3.2 identifies the range of alternatives considered. Section 3.3 discusses 18 potential locations for the deepwater port. It builds on previous California Coastal Commission studies that evaluated nearly 100 locations. In addition, Table 3.2-1 identifies six alternative technologies that are evaluated.

The selection of the No Action Alternative by decision-makers, for which they have full discretion, would not fulfill the purpose and need of the Project to supply natural gas to California consumers but would maintain, for an indeterminate time, the status quo of California's and the nation's existing and projected energy supply mix, including conservation and renewable energy sources.

As discussed in Sections 3.3.1 and 3.3.2, the MARAD and the CSLC do not have the authority to initiate or implement additional broad-based, long-term conservation or renewable energy policy measures. They also do not have control over whether such measures will be proposed, approved, and implemented, or the time frame over which these actions might occur. Nonetheless, the agencies' actions could impact the State's energy supply mix. Any

decision by the government to increase subsidies or otherwise promote additional conservation or renewable energy would be independent actions taken on this DWP application by MARAD and the CSLC.

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Thank you for the information. Sections 1.2.2, 1.2.3, 1.2.4, 3.3.1, 3.3.2, and 4.10.1.3 contain information on the need for natural gas, the role and status of energy conservation and renewable energy sources, and the California Energy Action Plan.

Sections 3.3.1 and 3.3.2 address conservation and renewable energy sources, within the context of the California Energy Commission's 2005 Integrated Energy Report and other State and Federal energy reports, as alternatives to replace additional supplies of natural gas.